

THE FARMER SPEAKS



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BY

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WITH A FOREWORD BY

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TO
M. E. M.

EQUAL PARTNER
AND CO-WORKER
IN THIS STUDY

FOREWORD

THE socio-economic investigations which form the basis of Dr Moomaw's book were conducted ten years ago. Since then the world has passed through the ravages of a cataclysm, the like of which, we pray fervently, may never again disfigure the story of mankind on earth. But this great international struggle has left its impress on the political, social and economic structures of different countries in diverse ways. The destruction and shortages of various types of primary products have affected national economy in the countries of production. The rise in the prices of agricultural commodities has altered the economic basis of rural life in India, though not altogether or invariably in a favourable manner. While, therefore, the main thesis of Dr Moomaw's presentation of some aspects of our rural economy still holds good, it cannot be denied that if he were to resurvey conditions today in the tract that he has covered, the results of that survey might be somewhat different.

Another factor which has influenced the course of our economic history has been the change in the system of Government. With the inauguration of responsible Government in 1937, the administration in Provinces came, at least for a brief duration, to be entrusted to the care of Ministries responsible, through the Provincial Legislatures, to an enlarged electorate. During the short term in which the

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Congress Ministry held office in Bombay, it inaugurated measures of agrarian reform in the Province such as were intended to have a far-reaching effect on rural economy. The advent of independence ten years later, apart from its immense political significance, connotes a change which cannot but lead to a transformation in the economic fortunes of those working in fields and factories. The re-orientation in outlook that has taken place was essential to introduce conditions congenial for the unfolding of a progressive rural economy, making reform broad-based on the willing and intelligent co-operation of the persons concerned, rousing people from their apathy and overcoming the hostility to reform of certain strata of rural society.

A few illustrations of the impact of the changes in our political fortunes may be cited here. The relations of landlords and tenants, to which Dr Moomaw refers, will no longer be left to be regulated by bargaining or the operation of the law of demand and supply, but will be governed by an enactment, the comprehensive scope of which will enable several of the evils that Dr Moomaw describes to be rooted out in a short while. Appreciating the part played by credit in the economics of agriculture, Dr Moomaw pleads for the drastic reduction of the burden of accumulated debt, the regulation of moneylending for the future, and the provision of facilities for fairly cheap credit for productive purposes. All these three objectives are met by the Bombay Agricultural Debtors' Relief Act which

is now in operation all over the Province ; and it is Government's ardent desire to have the process of debt adjustment completed in about two years' time. There will now be an end to unregulated usurious lending with the enactment of the Bombay Moneylender's Act, for the effective enforcement of which special machinery has been set up by Government. For the provision of credit for crop production and agricultural improvement, the system of *tagai* loans under the Agriculturists' Loans Act and the Land Improvements Act has been liberalized and largely utilized in the last two years. But recognizing that the state may be a benevolent lender but cannot in the long run be an efficient lender, Government have approved of the programme, formulated by co-operators and others, for the extension of the system of rural co-operative credit and for its reorganization to serve as an effective substitute for private moneylending.

About agricultural organization of the type familiar to students of agricultural progress in the West or in Japan, there are only occasional references in the book. For the marketing of surplus produce, the introduction of agricultural improvements, the undertaking of schemes of joint irrigation, the co-operative method has proved as helpful elsewhere as it has in the field of consolidation of holdings, of which Dr Moomaw writes in some detail.

There is one form of agricultural reorganization which Dr Moomaw does not mention. I refer to the use of tractors or other forms of mechanical cultivation and the application to the soil of artificial

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fertilizers and chemical manures. There is a class of experts—agricultural and economic—who propound the view that without these aids India cannot raise the level of agricultural production and thereby succeed in improving the standard of life of the large numbers of its agricultural population. Apparently, Dr Moomaw does not subscribe to this school of thought, it may be because such form of improvement has been beyond the ken of the man behind the plough whom he has consulted before drawing up his analysis of the malaise of our rural economy. In any case, it is a feature of his thesis, the significance of which should not be lost on agricultural economists and administrators.

Of secondary occupations and cottage industries only two, animal husbandry in the sense of the maintenance of plough and milch cattle and poultry farming, claim Dr Moomaw's attention. Both these are important, and the experience of the vocational Training College at Anklesvar in the latter field, set forth in detail by Dr Moomaw, will be helpful to the agricultural reformer in drawing up his schemes for the introduction and development of this secondary occupation. In assessing the income of the agriculturist, the return from subsidiary occupations usually comes in for mention. There is scarcely a country in the world where the farmer does not supplement his income by resort to other suitable occupations, either throughout the year or in off-seasons. A survey which ignores this factor in agricultural economy may, to a certain extent, appear to present a picture which is not wholly complete.

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All that Dr Moomaw has to say on the subject of the present state of rural education and the need for its redirection is pertinent, based, as it seems to be, on personal experience in this field. The new educational programme of the Government of Bombay is intended not only to diffuse education all over the Province but also to make that education helpful and beneficial to the rural community. Accepting the value of training in craft, which is emphasized by Dr Moomaw, arrangements are in progress to introduce this on well-ordered lines throughout the Province.

Equally pertinent are Dr Moomaw's observations on the subject of rural health and hygiene. A vigorous drive has been initiated to make good the deficiencies in both the directions, to which Dr Moomaw draws attention; and if that drive has not gathered sufficient momentum yet, it is only because of the lack of an adequate number of properly qualified and equipped public health workers and medical men and women prepared to settle down and serve the countryside.

A distinguishing feature of Dr Moomaw's book is the human touch which throughout inspires it. It need not be the monopoly of those belonging to this land of ours to establish contact with the men and women who, as Gandhiji invariably urged, represent the bedrock of Indian society. Those devoted to the service of humanity can make friends and win confidence in distant climes, even though they may be foreigners. One need not quote examples to justify such a statement. But, whether

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Indian or non-Indian, the individual anxious to examine and aid should approach the rustic in a spirit of inquiry, imbued with a feeling of humility. Socrates is welcome in an Indian village, but not if he goes about putting on airs of superiority as an all-knowing, and occasionally all-powerful personality with preconceived notions; he may be eager to 'uplift' but not humble or patient enough to watch or to learn and to help. That Dr Moomaw belongs to the category of seekers after truth but not preceptors is one of the main recommendations of this work of his. Throughout, it is the farmer who speaks; and Dr Moomaw merely interprets and imparts to the vague aspirations of the farmer a concrete shape embodying these in a form which can fit in with the agricultural policies of any progressive state.

Bombay
4 January 1949

VAIKUNTH L. MEHTA

P R E F A C E

THE farmer seldom speaks. Even when tried by famine, flood or frost the outside world rarely hears from him. We have never considered him very important. His only job is to feed and clothe all of India, and there is nothing dramatic about that. Towns and cities may have their strikes and riots, but the farmer goes on quietly, feeding and clothing them all. If, after paying his taxes, interest and rent, there is little or nothing left for his own family, the outside world hears no complaint. Consequently he is a stranger to many. In planning for public services it has been easy to overlook him. It was only after cities and towns had high schools and colleges, that primary schools began to emerge in the rural areas.

Tourists may be charmed by the Taj Mahal or the luxury of port cities but, to the realist, India is the farmer, working almost bare-handed in his struggle against Nature. By reason of his vast numbers and the weight of his opinion he sets the pace for the country as a whole. To a large extent life is geared to him and to his occupation. If he is poor, the country is poor. If he prospers, the country prospers with him. Plans for social and economic improvement may be carefully made, but they often stand or fall according to the response that the farmer gives.

He is a man of simplicity. Proud of his traditions, he looks to the past for guidance. However badly the villages may fester in poverty and disease, they are his own. If they are changed it will be largely by his own efforts. Elaborate plans made on paper for his improvement often leave him cold, especially when they ignore his sense of pride and allegiance to the past. To him many things are as they were designed to be. He is only a sojourner here for a short time. If he suffers disappointment here the future may compensate him. Suffering and pain are a part of life, to be endured in silence. With the rising interest in village improvement and the increasing awareness that life for the country as a whole depends to a large extent on the farmer, it becomes important that we make every reasonable effort to see his situation as he views it.

So, in order to present the peasant farm situation more clearly, we conducted a first-hand study of farm operations and other aspects of life with 192 'backward-class' farmers of South Gujarat. In this group are the Raniparaj, Bhils and others, among whom we find some of the social and economic disabilities of village life in their most acute form. They are often referred to as peasant farmers. They are, in general, small operators who have to depend on such fields as they can rent from year to year.

Accounts of income and expenses were prepared as far as possible for the 192 farms. Attention was also given to such factors as land tenure, indebtedness, farm credit and health. The information for the following chapters was supplied chiefly by the

192 men and others who assisted. They speak here of their land, income, health difficulties, education and their level of living.

The year 1937-8 was chosen as the period for inquiry. In certain essential aspects, such as farm prices, rainfall and yields, this was regarded as a normal year. This is particularly true since the year 1937-8 occurs between the depression years of the early thirties and the dislocations associated with World War.

The year 1937-8 was in general the last 'normal' year prior to the inflation of prices during and after World War II. The figures for wages, inventories, prices of farm products will be found much lower than prevailing prices today. The study, however, was directed toward the major processes in agriculture and rural life such as land tenure, indebtedness, credit, health, etc. These are basic regardless of the price level which prevails. The author regrets that war and postwar conditions have prevented the publication of this manuscript until now.

In addition to the study of 192 farms, a more general and supplementary inquiry was conducted for certain similar farm situations in other provinces. It must be kept in mind, however, that the records given and opinions expressed are only for the people and the geographical area designated.

Purpose and Method of Inquiry

There were several reasons for conducting the study. First, it was an effort to understand more clearly some reasons for the poverty and distress

among backward-class people. Their continued disabilities have long been the concern of those who work for their relief and betterment. Judging from space given in the Press we would conclude that the distress of these people and the finding of suitable measures for their relief constitutes one of the most urgent problems in India today. Their lack of response to plans proposed for their 'uplift' suggests the need for approaching the problem from their own viewpoint, just as nearly as possible.

Again, many schools, colleges and improvement boards have undertaken the teaching of classes in rural, social and economic problems. Due chiefly to the lack of concrete materials, the teaching often proceeds largely along academic lines. It was hoped that the study might provide more concrete information for use in conducting such classes.

During recent years farming has frequently been suggested as a possible vocation for the increasing number of graduates who are unable to find employment after leaving school or college. Such young men are constantly asking the question, 'What can I earn if I take up farming?' It was believed that a study of farm organization and income for a sufficient number of farms might be helpful in answering this and similar questions. Our section on Farming as an Occupation is an effort toward that end.

Finally, peasant farming in India has some phases probably without parallel in other countries. It was believed that inquiry into some of these would be of interest to readers elsewhere.

As nearly all the farmers were illiterate the procuring of information was difficult. Only by timely visits to the farm and threshing-floor could satisfactory records be obtained. Local teachers also co-operated well. Assured that figures given and opinions expressed would be duly guarded the men spoke freely concerning crop yields, indebtedness, rates of interest, education and the causes of illness.

In Part One we present extracts from typical interviews. This provides a clearer picture of each situation through the farmer's eyes. It shows something of the method used for eliciting information from people willing to give it, but handicapped by the lack of records and accounts. While some refinement seemed necessary in the process of translation, the original ideas have been preserved.

Part Two presents in condensed form the summary of information collected, classified under different heads.

Part Three contains some of our own observations based on the results of personal inquiry.

The study has limitations and the author is aware of some of them. Sometimes, in the absence of records it was necessary to depend more upon estimates than would normally be desired. Other phases of the study, for example those concerning education and health, are not nearly as complete as one wishes they were. Only those who undertake work of this kind can fully understand the circumstances met. However, if the results obtained should be of help to some in their work and encourage

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others to proceed further the effort will have been well rewarded.

The author gratefully acknowledges the large amount of help received from farmers, local officials and teachers. Invaluable help in planning the study and in organizing the materials was received from Dr J. I. Falconer of the Ohio State University where the manuscript in its original form was presented in partial fulfilment of the requirements for the Ph.D. degree. Mrs Moomaw as a partner at all times has rendered invaluable help in many ways.

*Anklesvar
Broach District*

I. W. M.

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PART ONE



PART ONE

CHAPTER ONE

MY LAND

GOVIND

I HAD met Govind on several occasions. The first time, he had taken his yoke to the stream near where he was ploughing. He was tall, dressed in homespun and about thirty years of age. It was a hot September day and as the oxen drank he bathed their necks with the cool water. They were the major part of his farm and he treated them as partners.

At his word they were out of the water and on their way back to the field. I held the plough for a few rounds while Govind drove. He spoke to the oxen only at the end of the furrow. This too was different, for I remembered other drivers I had seen. With oxen puny and half-starved, driving meant the twisting of tails, jabbing with an iron spur and continuous yelling of such curses as 'Your mother was an outcaste', 'The tanner will get your hide'. But Govind knew his oxen and I realized that I had met a good farmer.

Some months earlier a youthful health worker had come to his village to demonstrate the making of soap. The water and oil were measured out with due formality. Then began the young man's search for his glass stirring rod. The crowd waited in profound silence. For a while it seemed as if the

demonstration might have to come to an abrupt end. Govind disappeared just then and returned in a moment with a clean piece of fodder. He began stirring the mixture, to the amusement of the crowd and the relief of the demonstrator.

He never attended school, but he is skilful and thrifty. Strangers who come to the village usually stop at his house. So when I wanted to see the land problem as the farmer views it, I naturally called on Govind first. It was near the close of monsoon when I went to see him. A seven-anna ticket on the narrow-gauge railway, then a nine-mile ride on the bus and a winding footpath for another two miles brought me to his village. I found him towards evening in a field three-quarters of a mile from his house. He had unhitched his yoke so that they could graze nearby. We spoke first of his fields, for land is the chief concern of the peasant farmer.

‘I have five fields’, he said. ‘This one you can see.’ It was an odd six-cornered plot of $2\frac{1}{4}$ acres, with mounds of earth at each corner to show the boundaries. Climbing on one of these he pointed toward a long narrow strip of $2\frac{1}{4}$ acres about a half-mile farther on. ‘Another half-mile beyond and a little to the north I have four acres. South of the village I have two fields, one of two acres and another of about one acre. In all nearly twelve acres.’

‘Your own?’ I asked.

‘Yes. This and the two west fields were my father’s. I inherited them. Have purchased the

MY LAND
other two. Had to get into debt to pay for them
and they are still mortgaged.'

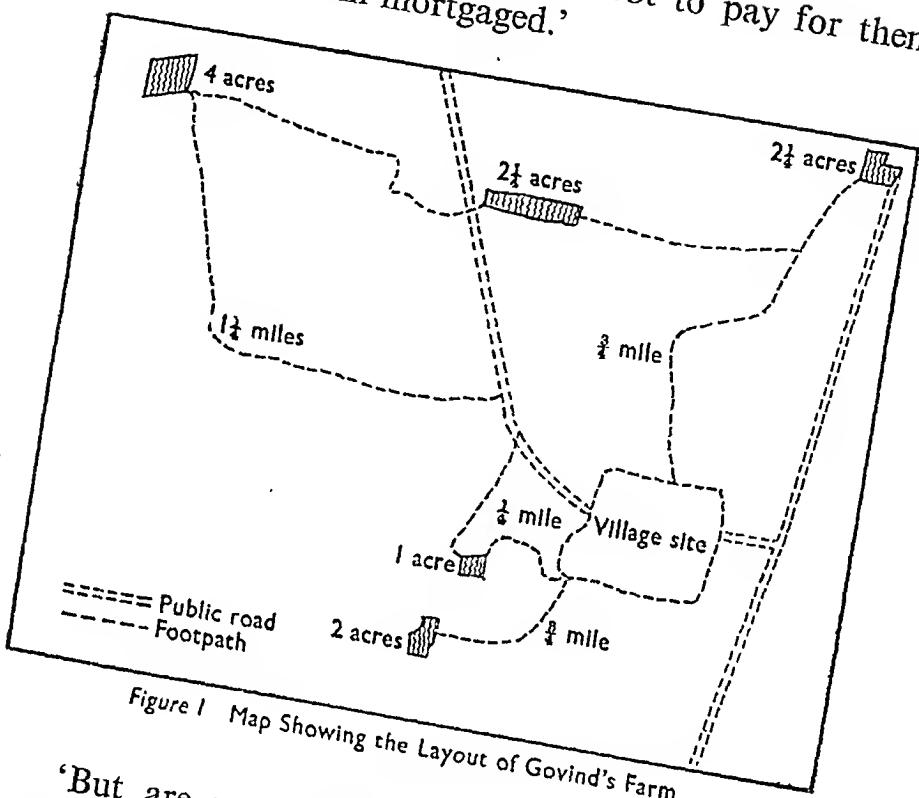


Figure 1 Map Showing the Layout of Govind's Farm

'But are your fields not badly scattered?' I asked.

'Yes, everybody's fields are that way.' Then I sketched his farm quickly, five fields all disconnected with a number of other people's fields coming between them. Only two could be reached by public road. To reach the other fields he had to cross land belonging to his neighbours. He had to travel nearly four miles in order to reach all of his land.

'Would it not be better to have all of your fields in one place?'

‘Yes, perhaps. But how? This gives me land in different places. If the crop is lost in one field there may be something in the others. But this causes me trouble. It takes much time to go and come. To reach the west field during monsoon the oxen have to be unhitched, and I carry the plough. We have always done it that way. It is troublesome to haul manure to the fields, and guard the crops. If the land was all in one place I could fence it and dig a well.’

‘Do you need more land?’ I asked.

‘This will do I could not get more anyway. No one is selling land and no one buys. About the only transactions in land are when the moneylender forecloses. Three of my neighbours lost fields this year. I hope to hold mine, but who knows? The rate of interest is too high. The sowcar sucks my blood.’

His one-room house was lighted by an oil wick flickering from a stool. Furnishings consisted of two rope beds, a child’s cradle, two stools, a hand-mill, brass and earthen cooking vessels, comb, mirror and a fishing-net, altogether worth about Rs 43. Behind the bamboo mat, in one corner, Govind’s wife prepared the evening meal of jowar¹ bread and pulse. Although the room showed the scars of poverty, it was clean. The evening meal was well cooked and was served on polished brass plates.

‘I built the house in 1926’, said Govind in reply to my question. ‘Teakwood poles for the frame and bamboo for the walls were hauled from the forest

¹ Grain Sorghum.

MY LAND

sixteen miles away. They cost Rs 48. Two hundred palm leaves for the roof and rope cost another Rs 10. I paid the carpenter Rs 45. We plastered the walls and made the earth floor ourselves.

‘We need a well. There is only one in the whole village and that is at the Thakor’s place. If there is time we carry drinking water from the river, but that is a quarter of a mile away. Sometimes we just bring water from the tank.’

I thought of his statement as we walked past the tank early the following morning. Oxen and buffaloes waded about in the water, some people were washing clothes, some were bathing and others were carrying water home for drinking, all from the same source.

Again he said, ‘We need a well in this village. The water is bad.’

RAMJI

Ramji is a tenant farmer, depending entirely upon rented land. He is fifty-two years old, and went to school for two years. Acquainted with flood, drought and frost he is but one in a great multitude who have had similar experiences. But let him speak.

‘I married at sixteen, and worked with my father for eight years. At his death I inherited six acres of land. I then borrowed Rs 85 and began farming for myself. The interest was Rs 36 and I paid it annually for three years.

‘Then I lost one of my oxen from sickness. The same year the rains failed. I could not pay interest

THE FARMER SPEAKS

and borrowed Rs 30 more to pay the land revenue. During May, June and July we had no food in the house so I borrowed grain weekly from the sowcar. This kept us alive. I kept no account, but it was about sixty pounds of grain per month. He also advanced me some money for seeds and for hiring labourers. It must have been about Rs 30. That year at harvest time I paid back Rs 55.

‘For four years I could not pay all the interest. Crops were not good and several times I borrowed a little money. All of my land was now mortgaged. Until 1926 I paid part of the interest each year and occasionally borrowed a little money or grain. That same year the sowcar asked for full payment of his bill. With interest it amounted to Rs 720, according to his records. I was thinking that I had taken about Rs 175 in grain and money. However it was, my land went. Since then I rent land. I have ten acres now, on shares.’

‘Do you prefer cash or crop-share renting?’ I asked.

‘Cash renting is better’, said Ramji. ‘There is less trouble. You grow whatever crops you want. Then at harvest time you pay over the money. Of course with low prices for cotton and grain it takes much of the crops to pay rent.

‘Most farmers would prefer cash renting if it were not for the difficulty of making payment in lean years. You can always give half of the crops, good or poor, but it may not be possible to raise a sum of money. If you fail to do that you may be

closed out. So we prefer share renting, which is safer and easier.

‘With share-renting I give half of the crops, and I grow whatever the landlord wants. He furnishes the land. I furnish the seeds, do all the work and since 1928 I pay half the land revenue. I deliver all the cotton to his place. He sells it and takes from my share whatever I owe him and also my share of the land revenue. For two years I have received nothing back from the cotton. We divide the grain on the threshing-floor and I deliver his share either to the market or to his house. I also deliver his share of the fodder, hulls and cotton stalks.

‘As I have land belonging to two different men it is often hard to do the work just when they want it done. If they haul manure or send their own oxen for crops I have to pay for that too.

‘I need at least ten acres more but cannot get the land. A man never knows whether he will get his fields for another year or not.’

‘How could the present method of renting land be improved?’ I inquired.

‘First the landlord should pay all of the revenue’, Ramji said. ‘It is enough if he gets half of all the crops delivered to his house. If the farmer does his duty he should have first claim on the fields for another year. If I could have the same fields each year, and some money at less interest, I would improve them. This way the land gets worse every year. I never know if I will have it again or not. A tenant needs at least twenty-five acres in order to support a family.’

THE FARMER SPEAKS

All Ramji had in the way of equipment was:

1 yoke of oxen	..	..	Rs 48-0-0 ¹
1 cart, very old	..	..	, 20-0-0
1 plough ..	..	..	, 2-8-0
1 wooden cultivator ..	..	..	, 2-8-0
yokes and small tools		..	, 8-0-0
			<hr/>
	TOTAL	..	Rs 81-0-0
			<hr/>

No one can cultivate even ten acres with such limited equipment.

'If I could have the fields permanently, and some money at less interest, I would improve them.'

Ramji is typical of many who in recent years have lost their land. They are now working either as tenants or farm labourers, often on the land that was once their own. I hope that someday Ramji will find a landlord wise enough to see that liberal terms of rental and financing are to the interest of both landlord and tenant.

¹ All figures are for the year 1937-8. Please see paragraph 7 in the Preface.

CHAPTER TWO

MY WORK

GOVIND

‘**M**Y people were all farmers’, said Govind. ‘The question of what occupation I should follow never arose. I naturally became a farmer.’

‘Not all the boys are becoming farmers now’, I remarked. ‘Here is Ramsingh’s boy, a tailor, Mohan is in the police department and Ramlal is with the railway.’

‘Yes,’ he said, ‘but things have changed now. Boys who go away to school do not return to the farm if they can help it. We have a proverb “The highest work is farming”, but I am not sure that anyone really believes that. I am contented and would not change now.

‘Farming is hard work but we do not worry about that. Only when the rains fail and we cannot plough, sow and reap do we feel great concern. But it is all in the hands of Bhagwan and we can do little to change the course of events that are to happen. My hardest work comes in early monsoon. Arising about four, I pasture the cattle for two or three hours, then have food and begin the day’s work. I do not return home until late at night.

‘During May I clean the fields and apply manure. When the first rain comes we are ready. Cotton planting is first. I cultivate the fields as soon after

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the first rain as possible and plant the seed. Much depends on luck. If the rain stops for too long a time the plants only spring up and die. If heavy rains follow and pack the soil immediately after planting, the seed cannot grow. We sometimes prepare the fields and plant cotton two or three times before we get a stand. It is important to get a proper stand just as early as possible. Those who do not may lose half their crop.

‘In a normal year we have to weed the cotton twice by hand. My family help but we also hire labourers. They get As 4 a day. In early monsoon when they have no food we supply the noon meal and pay only As 3 a day. Women and men get the same wages.

‘My next monsoon job is to prepare the fields for jowar. If the rain comes evenly I can plough and cultivate regularly. Sometimes the rains continue for weeks and then we have to clear away the weeds and grass by hand. During the monsoon I plough furrows as deep as possible. This helps to preserve the moisture. Two ploughings are needed, one lengthwise and another crosswise. At the close of monsoon we work the field twice with the cultivator. If the soil is ploughed at the proper time this leaves it ready for sowing.’

Many farmers less ambitious than Govind or with poor equipment find their fields a rough and rapidly drying layer of clods at sowing time. The result is a poor stand and often no crop at all.

The seed drill consists of a heavy block of wood, two ‘teeth’ or coulters, a tongue for hitching to the

yoke, two bamboo tubes and a small hopper. Like the wooden plough it has probably undergone very little change during the last three hundred years. Yet in the hands of a skilled operator it is fairly well adapted to the small farmer's needs. It costs only Rs 6, is easily transported from field to field, and can be repaired by the local craftsmen.

'November and December are good months', said Govind. 'The main crops are planted and their cultivation is completed. Then I get some free time. From January we guard the jowar from thieves by night and from crows by day.'

'Jowar harvest begins in February. I hire labourers to help us cut off the heads and pull up the stalks. They receive ten pounds of jowar or As 4 a day. In addition, each receives some green heads for roasting.'

'Almost before the jowar is harvested and threshed the cotton is ready. We always need to hire pickers and we pay them As 4 a maund. A good picker can earn As 6 a day if the crop is good. Cotton is picked about four times and the season often lasts for two months.'

'Are there not slack seasons when you have no work?' I asked.

'Very seldom. Sometimes during the monsoon, if it rains too hard. During November and December our work is light. During April and May we have some free days. But if I haul out manure, clean up the fields and repair fences I am busy all the time until the monsoon. Farm labourers

CHAPTER THREE

MY CROPS

BUDHIA

BUDHIA represents the large and increasing number of low-income tenants. In the quest for land they are often pushed out to the thin soil which the better farmers pass by. Only in good seasons can such land produce a fair yield. I asked him first about his crops and land. He was brief.

‘I have four fields this year, in all $11\frac{1}{2}$ acres. They belong to two different men. I rent for one year at a time. Never know for sure what land I may have the coming year.

‘I give half of whatever grows and pay half the land revenue. The seed and hired labour are on my head.’

Asked how he apportioned his land for the different crops he replied, ‘The landlord wants cotton, but I must have food. With me it depends on the number of mouths to be fed. We are six, you know. We must have at least forty maunds of jowar every year. That is the least.’ (I have learned long since that the peasant farmer is accustomed to the minimum in many things.)

‘This year we had $7\frac{1}{2}$ acres of jowar. My share which remained was thirty-four maunds. That is our food. We also used one acre for tuer. My

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'.... a melancholy picture of erosion and mined soil'

Typical Gujarati peasants from Mansa, north of Ahmedabad



part of the crop was $2\frac{1}{2}$ maunds. I have to think of our food first. That takes much of the land.'

With men like Budhia, farming is a gamble in rain and seasons. They refer to it as 'taking crops'. With their thin soil and meagre equipment the odds are against them from the start. Markets are of secondary importance. They farm chiefly for the food they can produce.

'Do you use any manure?' I inquired.

'None. I have no cart. Besides, my land belongs to two men and neither one cares. How could I use manure when I do not know if I shall have the land another year or not? We burn manure for fuel and occasionally I have some to sell.' His fields presented a melancholy picture of erosion and mined soil.

A moment of calculation showed that his cotton crop had yielded scarcely four maunds per acre, and his jowar nine maunds. He saw no hope of increasing these low yields. That man's own acts might be responsible for any increase or decrease in yield did not seem to deserve his consideration. 'I sow the seed, then it is in the hands of Bhagwan.' In his whole farm programme we could find no suggestion of improvement, except that of late years he gets his jowar seed from a Muslim who has a sieve which 'takes out the small grains'. But for tuer seed Budhia is content to use 'whatever may be left in the family bin'.

Planting is done 'whenever we can get ready'. Much depends on when the rains come. 'In the good days men consulted the astrologer for an

auspicious planting day. But we have stopped that. It is our loss. Some religious people still do.'

As he spoke, I remembered a familiar scene of small groups of people moving from house to house whenever the rains were late, some singing, some dancing, and others asking for food or money. 'What does that mean?' I inquired.

'If the rain does not come, it may be that Prabhu is displeased. The poor have no money to give so they go out and beg from the rich. With the money they feed the poor people and starving cattle. Prabhu may be moved to compassion by their acts of mercy and send rain.' While many still resort to this practice, it is doubtful if they believe in it seriously.

'Once crops are planted, can you care for them yourself or do you hire help?' was our next question.

'My wife and I do what we can, but I must hire help for weeding cotton and for harvesting the jowar. We have three boys at home but they are too small for field work. The eldest boy is away working to pay off his marriage debt.

'His wedding cost Rs 150 for new clothes, ornaments, food and drinks. I had Rs 70 in the house and we borrowed Rs 80 from Sorabji Sheth. The boy is now working on his farm to pay that back. He gets his food, one suit of working clothes and Sorabji reduces the debt by Rs 25 each year. Sometimes he borrows a little more money for clothes or tobacco. Still he ought to get free in four years. He has served for two years and has two more remaining.'

We spoke of education, for I have always held that a farmer should at least be literate.

'I never went to school,' said Budhia, 'nor did my wife. We are working people and would have no time. The two boys help to herd the village cattle. They each get one meal a day and As8 per month. The boys must work, for we could not eat otherwise. Yes, they could attend school for two or three hours in the morning or afternoon, perhaps, but the teacher wants them all day. We cannot afford that.'

DHANJI

Dhanji, another farmer, told a happier story. 'I have four and a half acres of ancestral land and rent nine acres for cash. I am generally free to grow whatever crops I like, but the landlord wants more cotton. There are three adults and four children in my family, so in planning what to grow we must think first of our food.

'I have four acres of jowar. It yielded seventeen maunds per acre and we needed that much for food. Besides, I also have to use some to pay labourers. We store the grain in two bins made from clay and chaff, mixing wood ashes with it to prevent weevils. That is our chief food supply and we draw from the bin as we need it.

'I also plant one acre of legumes, tul and tuer. I grow some rice with the cotton plants on about two acres of land. So, besides jowar, we have $3\frac{1}{2}$ maunds of tuer; tul enough for 30 pounds of oil and $11\frac{1}{2}$ maunds of rice. If we eat less, this grain will carry us through the year.'

'I grew six acres of cotton. This year it yielded forty-two maunds and I received Rs158 for it. From that I pay Rs78 as rent and Rs10-4-0 for land tax. The remaining cash I may use for other farm and household expenses.'

In reply to my question about rotation he said, 'It is good to change crops from year to year. Jowar draws very hard, so we like to follow with another crop when possible. Legumes are the easiest for the land. They are cool crops. But in deciding what crops to grow, I think first of our bread, then plan as much cotton as possible to get cash in hand for taxes and rent.'

'Yes, we have a small garden in the monsoon. We grow some vegetables and chillies for use during the year.' He kept no account for the garden products but we estimated the value at:

Vegetables	..	..	..	Rs3	8	0
Chillies	..	..	..	,,	3	0
				TOTAL	..	Rs6 8 0

Even a small garden plot may add much to the family's food supply. Moreover, a home garden is generally the mark of a thrifty farmer.

Dhanji had rented the same fields for six years and showed some of the pride and sense of security which come with more permanent tenure.

'I save what manure I can for use on my own land. Occasionally the landlord furnishes some manure. I pay half the cost and we use it on his land. I deliver all the cotton to his place. He sells

it, takes out whatever I owe him for interest and rent and gives me whatever remains of my share.'

Asked about his interest account he replied, 'I keep none. Patel tells me the amount I owe.'

FROST

The memory of the 1929 frost is still vivid in the minds of these men. The months which followed it were perhaps the nearest approach to famine that the present generation has seen. Punio remembers it as the beginning of a succession of events which eventually shifted him down to the status of a farm labourer.

'I had eleven acres of land at that time. I owned three acres and rented eight for cash. The crops were good that year and normally I could have paid my interest and rent. But one night changed everything. It was very cold. Some livestock without protection were killed by the cold and several deaths were reported among old people.

'About nine o'clock in the morning the effects of the frost began to appear. Cotton leaves began turning dark. Jowar plants too were killed. We waited in deep concern for several days, thinking that new leaves might come. But it was not so. We realized that a prosperous year had suddenly ended and famine was upon us.

'A small amount of the jowar was saved and a fourth of the cotton. Government gave us suspension for part of the taxes, but I had nothing with which to pay rent.

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‘I was already in debt for Rs 150 and could borrow no more. The lender kindly allowed us small amounts of grain. We ate once a day and waited for the monsoon to produce leaves we could gather for food. There was much illness. Two of our children died.

‘Seeing my condition the lender advanced me money for seed and some food. But when harvest time came I was too far gone to recover. I turned over the land, oxen and tools. Since then I work as a day labourer.’

The experience of 1929 has proved to be a strong argument in favour of diversified farming. Men who had planted a larger amount of grain instead of cotton had at least some food and forage for the cattle. Cotton farmers suffered most.

CHAPTER FOUR

MY LIVESTOCK

MANSINGH

DEPENDING upon the income from livestock for nearly a third of his living, Mansingh is more truly a farmer than many of his neighbours who merely 'take crops' and carry on with only a yoke of oxen. The crop farmer may tie up his yoke for the night and his day's work is finished. But Mansingh's compound was a more lively place as they cared for all of their animals and put them away for the night. I saw at once that he took pride in his livestock and my task with him was easier than it had been with some of his more stolid neighbours.

My first question was 'Where did you get all of these?' for they were a strange lot—three oxen, two female buffaloes, three worthless cows and four head of young cattle.

'The main yoke I raised up as calves', he replied. 'It takes about five years before they can work. The red bullock I bought from the Sindhis. He cost me Rs72 in all. I paid Rs35, then the balance in two payments, one-half each year. Many men buy their oxen that way now. The old buffalo I bought and the younger one is her calf.'

The three scrawny cows caused us the most trouble, for he neither knew quite where he got them

THE FARMER SPEAKS

nor why he kept them. 'The one I got from my brother and the other two came with the village herd, as calves. I took care of them. The larger one has a calf about once in three years. The other two, well, they help to supply some manure.' Neither had ever produced a calf, even though they were probably twelve years old.

With the counsel of his neighbours we took the simple inventory of his livestock as:

Kind of Stock	Number	Total Value		
		Rs	As	P
Oxen	3	170	0 0
Buffaloes	2	110	0 0
Cows	3	38	0 0
Young stock	4	56	0 0
			Rs	374 0 0

The oxen represent nearly half the investment in livestock and Mansingh observed, 'My first concern is for them. They must do the work.' The three cows with a nominal value of Rs38 are worth the least. Actually they are a liability to him, providing no income, yet consuming feed which might be placed to better use.

His boy brought out some bundles of fodder and grass. These were apportioned out with great care.

'Getting sufficient feed is the chief problem in keeping livestock', said Mansingh. 'The oxen have to be fed. They work all day. They get some grain and oilcake when they work hard. Purchased feed for them costs me about Rs 28 a year. Cotton seed

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is the main feed bought for buffaloes. At the close of cotton harvest the immature bolls are all gathered. These soaked in warm water are fed with grain. Cotton seed, some oilcake, rice bran and jowar are the other feeds purchased. Sometimes I must purchase fodder but I try to manage with my own.'

He had paid Rs 56 during the year to buy grain and other feed.

'The young stock get some fodder, but for the most part they pasture with the village herd. The cows give nothing and I cannot afford to feed them.' The village herd has a chance to build up during the monsoon when there is pasture. But for the rest of the year it only survives.

'Yes, it may be better to feed more and grow the calves to maturity quicker. But if we do not have feed?.....'

We spoke no more of his cows, for like many a farmer he just keeps them, without inquiring whether it is profitable or not.

'The buffaloes give us help: we would rather sell the fresh milk but often there is no one to buy it. Then we make ghee. We get As 1-3 a pound for milk in monsoon and winter and As 1-6 in summer. The ghee we can sell for As 12 a pound.' Each of his buffaloes would normally produce about 1,600 pounds of milk annually. He had received Rs 165 for milk and its products sold during the year.

'A cow is praised when she drops a male calf, and the buffalo if she produces females', said Mansingh.

He had two young female buffaloes subsisting on pasture and coarse feed. They each increased in value about Rs8 a year. 'We cannot afford to feed stock much until they are old enough to breed or work.'

He is caught there in the same vicious circle as his neighbours. He doubts if it will pay him to incur more expense to feed his livestock, and without better feeding improvement will not be possible.

'Bullocks can work on the farm for about twelve years. But it depends on the care they get. If they go down too far during the hot season they get ill and are soon gone when the monsoon work begins. I have never lost any oxen from sickness but many men do. That is the hardest kind of loss. It usually comes about October when a man must have his yoke in the field or lose his crops. The Government veterinarian helps us. with free medicines, but it is too far to go there. When rinderpest and epidemics break out they inoculate our stock free but many of the people are unwilling. There is a rumour that his inoculants are made from the blood of cows.'

A shed attached to the side of Mansingh's house sheltered his oxen. The other stock had an open shed. While his land is mortgaged he still considers it his own and applies about twelve cart-loads of manure to his fourteen acres each year. The money received from milk and young stock does not tell the full story. His yields of 9 maunds per acre for cotton and 22 maunds for jowar are probably

30% higher than those of his neighbours who 'take crops' only.

'My cattle provide me something to do during slack seasons. We could hardly live without the help we get from the milk and ghee.' His three children were free from the half-starved appearance of those who subsist on a grain diet only.

'I believe that if everyone were willing, we could improve our cattle. But it is hard for one alone to do much. Our public pasture is an example. All are ready to use it but it is overgrown with brush and no one cares enough to clear it. People say it is Sarkari land and its care is not their job. To improve livestock we first need a mind to do it. Better oxen and cows would help us much.'

'Better cows might give both milk and manure. But without money to buy them? Some money at low interest would help me. We could pay it back and get free after a few years. We might grow less cotton, use more land for growing feed if we had cash to help for the first few years.'

Like some of his neighbours, Mansingh sees the need for improving his cattle. But he is held back by religious sanctions, the lack of capital and the accumulated inertia of many years. He will accomplish very little if left to himself. Nor can Government hope to accomplish much without the full co-operation of Mansingh and his neighbours. Education, joint long-range planning and suitable financing are required.

CHAPTER FIVE

MY DEBTS

SUMANLAL

LIKE many of his neighbours, Sumanlal was in debt. But, unlike many, he is still planning to become free. So he answered our questions with such detail as he could. His candour and hope that something might be done were pitiable at times. We may read the formidable estimates of national indebtedness, oblivious to the fact that they represent the combined liabilities and distress of millions like Sumanlal. I present his own story as he told it.

‘My father had eighteen acres of land but he owed money in Ranapur where he had given a mortgage. The amount was Rs 320. I learned after his death that the rate of interest was 16%. Several times I heard him tell my uncle that he intended to pay off the debt but could not get all of the money at one time. When I was married he borrowed Rs 100 more. It was common to do that. It was in 1924, I believe, and my father paid the interest each year.

‘At his death I took charge of the farm and his other affairs. I kept up the interest but for three years it took everything we had. In 1931 I borrowed Rs 150 to buy a yoke of oxen. We were poor then and I had to borrow. The lender gave me that money for 16% and I wrote over three more acres

of land. Then we all worked to pay interest. At harvest time I sold just as much of the crop as I could for I needed nearly Rs 100 for interest. But we had to eat and at times I could not pay at all. Since 1936 I have paid about Rs 60 per year. I do not know exactly how much I owe now but it is about Rs 900. We have mortgaged half of our land.'

'Could you not make a new contract at a lower rate of interest which you could pay?' I asked.

'I wanted to do that and he said whenever I could pay what was in arrears he would. Since last year all interest accounts are "cold". It is said that Government is going to help to settle them.'

Sumanlal represents a large number of farmers who have been meeting their interest obligations even though interest charges have been excessive. He began with Rs 320 which his father owed. Another Rs 100 was added at the time of his marriage and another loan of Rs 150 was made for the purchase of a yoke of oxen. He has given fourteen of his best working years to the payment of interest and, due to his inability to pay the full amount annually, he now owes Rs 900, or half of his ancestral land. A debt arbitration board could render invaluable service to him and others in this condition. Probably no more constructive type of village improvement could be found.

NARANBHAI

In the same village we met Naranbhai. He is a tenant farmer, now forty-five years of age, and he

farms about fourteen acres of land on a half-share basis.

‘My experience with debt began a few days after I was married. I was about sixteen years old. For a week we all had good food, plenty to drink and smoke. On the day when my wedding took place we got new clothes. I had worked for Ebramji before but the second day after my marriage father said I should work there regularly. My wife had come to live at my father’s house.

‘I learned later that Rs 140 had been borrowed on account of my marriage and that I would work for Ebramji five years. He would give me food, field clothes and reduce the debt by Rs 25 each year. There was no interest charge. At the end of five years I would be free.’

‘Would it not have been better for your relatives to borrow the money outright and have kept you free?’ I inquired.

‘We never do it that way’, he replied. ‘It is not so done in my family. Besides my father had no land and no one would lend him money unless I became bound.

‘I had worked for Ebramji nearly four years when my father died. It was needful that I take the farming in hand, to support the family. So I bargained with Ebramji. I gave him one of my father’s bullocks and he released me.

‘But we needed a pair of oxen so I had to borrow Rs 60 from the landlord. We had no land so I signed over both oxen to secure the loan. We promised to pay Rs 18 a year. Without any other

debts I began farming the land formerly rented by my father. I paid the interest at harvest time. Three years later the crops were destroyed by frost. I did not pay the interest that year and also borrowed 20 maunds of grain. Without this we could not have lived.

‘We had much illness that year and Desai Sheth, the landlord, also helped us to get medicine and some feed for the cattle. My indebtedness increased much. Since then I have turned the crops over to him. He takes out first for his half and then for the money and grain I owe him.’

The landlord himself, a man of integrity, informed me that Naran still owed him Rs 160 or more and that his son would soon be engaged as a labourer on his own land to help to pay off the debt. A low farm income, lack of security and the concomitant high interest rate have formed a chain of circumstances which will keep Naran and many like him tied down probably for life. To him life means that he will go on paying interest and borrowing little sums as he can, or turn over his farm equipment and become a day labourer.

While Desai Sheth exacts a rather high toll for his services it must be said in his favour that he has assumed risks for Naran at times and under circumstances when no bank could have helped him. He supplies seed for planting, wages of hired labour, feed for the oxen and even clothes and medicines for Naran’s family. In return, the crops are delivered to his place and Naran recovers a subsistence share for himself and family.

Desai Sheth had two other tenants both in a similar condition. Supervising them and collecting his share of the crops and the amounts they pay is his sole occupation. Even allowing for the money he receives as interest it is doubtful if he makes as much as he would if each man were financially free and equipped to cultivate and improve the land as a permanent tenant.

I have introduced these two men because the indebtedness in each instance is closely related to the farm operations. They are typical of the manner in which the interest load on even a comparatively small sum may direct the course of a man for life.

'When or how do you hope to become free?' I asked Naranbhai. It was evidently a question which he had not considered recently.

'It is not possible to say.'

'But could you not get another contract and perhaps pay something more than the interest each year?'

'My lender does not want it that way. He wishes that I pay the full amount remaining at one time. But who could do that?'

'What agreement for repayment did you make at the time of borrowing?' I asked.

'Not any. I needed the money at once to replace the bullock and from there my condition began to get bad.'

'Many of your neighbours also are in debt, there are Ramsingh and Prabhudas. There must be some special reason', I said. By this time we were no longer alone as half a dozen men had gathered

where we were, at Naran's place. There were reasons in plenty.

'The farmer's condition has now become very bad.' 'No one can get much money from selling crops.' 'There is no price.' 'The seasons are not good.' 'A short time ago there was frost and for two years the rain was deficient.' 'The rate of interest is too heavy.' 'It grinds us into powder.'

RAMJI

In the midst of such melancholy stories it was refreshing to find several who had succeeded in keeping free from enslaving indebtedness. Ramji was one of these. He was the eldest of three brothers who owned sixteen acres of land and rented twenty-two.

'It was my father's rule not to make debts', said Ramji. 'He would not have any of us married until he had the money in hand.'

'Our life is plain. We use only food that we can grow, and wear cheap clothing. People in worse condition than we have shoes and coats and buy tea but we cannot do that.'

'But if your crops fail?' I inquired.

'Then we eat less, and besides, we keep a little money in the house. When the crops are sold we buy salt, spices and the clothes we can afford for the year. Nothing more. We always keep some money in the house to hire labour or meet trouble. We keep something back and seldom buy unless we have money to pay.'

'Have you ever mortgaged any land?' was my next question.

'Never. Sometimes when we need a yoke of oxen or a cart we cannot pay all the same year. Even so it is not our rule to sign over land and the traders know that. They allow us to pay the following year.'

Even though the motor bus passes through Ramji's village daily he admitted that he had only ridden on it twice during his life. 'Those things are not for us.'

While he and his brothers stress saving and simple life as factors in keeping free from debt we were convinced that skilful management of their small farm was even more important. Mere saving is not all. Money must first be earned. Two buffaloes and some young stock were an important factor in their being able 'always to keep some money in the house'. From their own statements crop losses were not as frequent for them, nor as heavy as for men who farmed less efficiently.

MOHAN

More fortunate perhaps than many others, Mohan was a member of a co-operative credit bank.

'I first borrowed Rs 400 from the co-operative bank to pay the vania. I had been paying him interest for about seven years at $12\frac{1}{2}\%$. With the bank the rate was 9%. After three years my account with the bank was paid up and I borrowed Rs 250 to buy another field. Since then I have borrowed at

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various times, once to repair my house and again to buy livestock.'

Asked his opinion about dealing with the co-operative or the vania he replied, 'The bank is more strict, but the rate of interest is lower and by making payments I always get free after a time. The vania lends more freely but the interest kept me down. With the help of the society I got free and my economic condition has improved.'

CHAPTER SIX

WHAT I EARN AND SPEND

THAKORLAL

THAKORLAL is about forty-five years of age. He studied through the third standard but his wife is illiterate. They have four boys and one girl. Three children are dead. He owns five acres of land and rents eleven for a half-share. His story provides us with a picture of what a typical family earns and spends. We have chosen him because, even though he is in debt, he is free to market his crops and handle the proceeds. In this respect he is more fortunate than many of his neighbours, and the estimate he gives should be relatively accurate.

'We depend mostly upon cotton for our money. For my share I received Rs 112. The price now is low. Cotton was formerly a good crop but the market has broken. My share of the grain is used chiefly for our food.'

The crops were already harvested and with his help we calculated his share in both cash and crops as shown below:

Products	Total value			Used at home			Sold		
	Rs	As	P.	Rs	As	P.	Rs	As	P.
Cotton	112	0	0	0	0	0	112	0	0
Jowar	52	0	0	40	0	0	12	0	0
Rice	15	0	0	8	0	0	7	0	0
Legumes (tuer and tul)	14	8	0	14	8	0	....	
Garden	7	0	0	7	0	0	....	
TOTAL ..	200	8	0	69	8	0	131	0	0

The total value of all products was Rs 200-8-0. Of this amount, grain and vegetables worth Rs 69-8-0 were used at home. Cotton and grain having a value of Rs 131 were sold for cash.

‘Where does all of that money go?’ I asked.
‘What do you buy with it?’

‘We do not buy much’, he said. ‘I pay interest first. That takes Rs 55 each year. If I pay it promptly the landlord permits me to harvest and sell my own crops and my land is safe. The land revenue amounts to Rs 13.’ These two items alone accounted for more than half of Thakorlal’s income.

‘If the year is poor some interest has to remain in arrears, but I pay as much of the interest as possible, and also the revenue, before we spend for anything else.’

Asked the purpose for which he had borrowed in the first instance Thakorlal told the same melancholy story that we had often heard before.

‘I borrowed Rs 250 from the vania when my son was married. The rate was As 2 per rupee per year. Occasionally some of the interest remained unpaid and several times we borrowed small amounts for food, or in case of illness. So I still owe the original sum.

‘Clothes for my family cost us at least Rs 30 a year. We cannot manage with less. My wife gets a few days’ labour and I can generally earn about Rs 12 with the cart. This extra income helps us with small expenses. The only foods we buy regularly are salt, spices and some vegetables. During the harvest season when there is money, or if there

are guests, we may have a little tea, sugar, ghee and milk. The food we buy would cost about Rs18 per year. Sometimes when my wife has outside work she earns a little wheat or rice.

‘We have food twice a day. At noon it is jowar bread with pulse. In the evening it is either jowar bread or rice with cooked vegetables. When work in the fields is heavy the men may have bread in the morning too.’

‘What is a meal?’ was my next question, asked in a humble effort to learn just how much food the people are getting, and what they mean by ‘food once a day’, or ‘twice a day’.

‘A meal may be more or less. In the harvest season we generally have enough, but during the period before the new crop is ready we are often in distress. If crops have been poor we often eat only once. In this way we spread out what we have. We still use the hand-mill and in times of want people may mix rice bran with the grain as they grind. It is bad food but it fills the stomach. Yes, we too use it sometimes. What else would we do?’

Hesitantly I inquired about milk, fruits, ghee or any extras, for I well realized the limitations of sixteen acres of thin soil, some mortgaged and the rest rented, to support a family of seven.

‘No milk,’ he said, ‘except occasionally during harvest, or if someone is ill. Of fresh fruits, none. We may have “good food” once or twice a year when there is a holiday or other special occasion.’

There is little wonder that people living a dull life of poverty look forward to a ‘time of good food’

with keen anticipation, be it a wedding, a religious holiday or even a funeral. If debts are incurred, why worry? The present is theirs. The future is so uncertain.

‘Repairs and small tools require about Rs8 a year in cash. Sometimes I work for the carpenter in exchange for his help. If there is no money he will take grain. We need more for feed but I spend only Rs10 for extra grain when the oxen are working.

‘The barber asks for money but we still pay him with grain. He takes forty pounds a year for a man’s work and half the amount for a boy.’

There is some travel by motor and an occasional trip by train but that must be done to the exclusion of something else.

A marriage is still the one occasion which calls for a large sum of money. ‘The father assumes the expense if he can, but often the son pays it later. We borrowed Rs160 for Manu’s wedding, but in all we spent nearly Rs200. We gave Rs125 for the bride. They spent a part of that to entertain us when we went to bring her. Then at my home we spent nearly Rs70 for clothing, a few ornaments and good food. I do not believe in it, but some of the guests expect us to make them happy with liquor. So it takes about Rs200 for a wedding. All agree that we should spend less but when the time comes no one is ready to have the present custom changed.’

Marriage even with the poor is a time of merry-making and pageantry. ‘Formerly the auspicious date for a marriage was fixed by the astrologer but of more recent years it depends more upon the

vania. He furnishes the money. When the date has been set we tie knots in a rope suspended in the house, one knot for each day which remains.

‘One knot is untied daily and during the days of waiting the people dance and sing, often from evening until dawn.

‘When the last knot has been untied the wedding party proceeds to the home of the bride, arriving in time for supper. The groom may not eat when the food is first served to him.’

I had personally seen this happen but never quite understood what it meant. ‘According to custom the girl’s father then offers him a present. It may be money, a goat or sometimes a cow, in good families. When the present offered is acceptable the father gives a signal and the groom partakes of his food.

‘I was given money by my father-in-law, and cloth for some of my clothes. We had our supper and the people sang and played music all night. Then in the morning the men carried me and my bride on their shoulders, while they danced in a circle. We were given some rice to throw at each other. I saw my wife for the first time then and after the rice was thrown it was said that we were married.

‘When we reached my father’s place it was my wife’s turn and she refused her food until father gave her a young bullock. Weddings are costly but the people like them that way and they are not changed much.’

We then spoke of health and education. 'In time of sickness we use home remedies. We have taken help from the free dispensary at Ranpur, but that is far away. Sometimes we buy fever mixture from the store. In all we spend not over Rs2-8-0 for medicines during a year.

'Our daughter and one son are in school. We paid Rs2-10-0 for books and supplies last year. Their extra clothing also costs us more than it would if they remained at home. The main thing is their help. We need them to work on the farm just when the teacher wants them in school.' There were no books in the house except the few which the children were using for their school work.

As nearly as Thakorlal could tell his slender cash income was divided out during the year as follows:—

Items		Amount
		Rs As P.
Interest on borrowed money	..	55 0 0
Land revenue	..	13 0 0
Feed purchased	..	10 0 0
Repairs and small tools	..	8 0 0
Seeds, etc.	..	4 8 0
Food and household expenses	..	18 0 0
Clothing	..	30 0 0
Medicines	..	2 8 0
School books, etc.	..	2 10 0
Miscellaneous and travel	..	4 0 0
TOTAL ..		<hr/> 147 10 0

JAMOL

Jamol is a tenant farmer indebted to his landlord and he has much less freedom in the use of his income

THE FARMER SPEAKS

than Thakorlal. Having borrowed heavily it is necessary for him to surrender all crops to the landlord. In return he is given some grain for food. Only small amounts of cash are released to him for special needs.

He farms eleven acres on a half-share basis and can get no more land. There was no way of determining accurately the amount of money which went for interest and farm operating expenses since he handles none of that himself. His family includes himself, his wife and three children aged three, five and eight. On their statements they received the following in products and cash for home and family use:—

Items	Value		
	Rs	As	P.
Cash	28	0	0
Food grain 32 maunds	45	0	0
Medicines and small supplies furnished by landlord ..	7	8	0
	80	8	0
Earned privately	7	8	0
	88	0	0
TOTAL ..			

They reported the few expenditures which they are free to make during the year as:—

Items	Amount		
	Rs	As	P.
Clothing for family	15	0	0
Foods purchased	14	0	0
Miscellaneous, small repairs	6	8	0
	35	8	0
TOTAL ..			

WHAT I EARN AND SPEND

No records are available for family expenses, but as mentioned earlier the illiterate man's memory serves him well. The above estimates are based on statements of the people themselves as to the amounts spent and a description of the articles purchased; we believe they are reasonably accurate.

CHAPTER SEVEN
MY CHILDREN'S SCHOOL
NATHUBHAI

NEITHER Nathubhai nor his wife ever attended school, yet no thoughtful person would call them ignorant. In the management of their home and the farm they would stand well among some of their neighbours who have had school privileges. But both Nathubhai and his wife have one serious handicap. They are illiterate. This robs them of the pleasure and profit to be derived from reading and of the help they could get from current circulars on health and agricultural improvement.

When Nathubhai has to borrow money or make a rent contract he can only affix his thumb-print, without reading what is written. To ask that a loan contract be read to him would be a reflection on the integrity of his creditors and he would not dare to take that risk. So with other millions he meekly affixes his thumb-impression, trusting that what is written above it is not too much to his disadvantage. Other more cautious souls will not press down the thumb until they hear the contract read.

With the growing interest in education among backward-class people I thought it would be of value to see education and the school through the

eyes of an illiterate man. With this in mind I called on Nathubhai.

‘I never went to school myself. None of us did in those days. It did not seem necessary. Now we are told that one must “learn” in order to get on.’

‘Could you not learn still? You are only thirty’, I suggested.

‘The teacher does have a class in the evening for some of the older boys and I attended it for a while. During the time I went to him I could learn, but not properly. At night all is dull before my eyes. I could not see well, so I gave up study and my knowledge soon left me.

‘I am sending Manu and Dhanji to school. They must learn.’

‘What do you think they will do when they are grown?’ I asked.

‘We may get more land and they can join me on the farm. It will be helpful if they can read and write.’

‘In what way will education help the boys?’ I inquired.

‘They will improve, I hope. If they can read and write they will not be cheated so easily in money dealings.’

‘How much education do you consider necessary for boys?’

‘They need much’, he said. ‘But I cannot keep them in school long. Five standards are enough. The expense is heavy. I borrowed Rs 4 to pay for books this year. Their clothes too cost us more if they go to school, and I need their help. When

there is work in the fields, I must often hire help because the boys are away in school.'

I then raised a question which is very much in the foreground today. 'Suppose the boys should attend school for only a part of the day, say in the early morning or late afternoon, would that be better for you?'

His face brightened. 'Much better', he said. 'Then their schooling would not be too heavy for me. At present school requires nearly all of the day and that is difficult for us.'

I realized that I had unwittingly found an ardent supporter of real Basic Education in the mind of this honest farmer who knows well what he needs even though he may not have a special name for it.

'What is it that the boys need to learn most in school?'

'Counting and reading', he said. 'When I was young it was not so but there has been much change.'

I then mentioned several places where underprivileged people are supporting schools of their own because there is no Government or Mission school available. 'Why this sudden interest in education? People will sometimes sacrifice food or clothing in order to pay their part towards the wage of a private teacher. What does this mean?' I asked.

'It means that we must now have our children in school. There is no other way open to them, if they want to improve.'

Nathubhai may be somewhat exceptional and no doubt his awakened interest represents only certain localities. But wherever such interest in education

exists it offers a challenge to all who wish to see better farming and the general improvement of village life.

'What about the girls?' I inquired. 'Will they go to school too?'

'Yes, but we cannot send them for long. Perhaps for two or three years at the most. It is costly and we must have help at home. When my wife goes to the field someone must remain at the house.'

'Do you think that girls need less schooling than boys?'

'They can manage with less', he said. 'Two or three books would be enough.'

On the same trip we visited the small Mission school in Nathubhai's village. There were 41 children enrolled. The enrolment by standards follows below:—

<i>Standard</i>	<i>Number of pupils</i>			
Kindergarten	16
First	11
Second	7
Third	5
Fourth	2
				—
		TOTAL	..	41
				—

The teacher explained to us his problem of keeping children in school long enough for them to attain literacy. They begin to thin out rapidly after the first grade. Rather pessimistically he said that in the kindergarten the problem is to keep the

enrolment down. Some parents are tempted to use it as a nursery room and bring their children in just as soon as they can sit.

The school has been running for seventeen years. In all twenty-four boys have passed through the fourth standard, which is regarded as the requirement for literacy. Among the children enrolled, five were girls. It is still unusual to find backward-class girls in school.

‘What about agriculture and handicrafts?’ we inquired.

‘I have a monsoon garden and the children like it. But we have no water now. The parents do not care much. They seem to care more about reading and counting for their children than anything else.’

We then asked Mansingh the teacher what he considered most essential to help his people socially and economically.

‘They are at present chained down by indebtedness. They are not free to plan their farm business and interest takes any surplus they may get.’

He then drew from his table drawer a small two-pice book in which he had written the names of all his pupils, each on a separate page. ‘This is our thrift book’, he said. ‘The parents often have no money for books when school opens in June. So we have founded a Thrift Society here at the school. Each boy and girl has his or her own account. Every week we set apart a period for depositing money and all who are able to save up something bring it and we place it in their account. In this way many saved enough last year to buy their own books. We

also saved over three rupees in a common fund to pay the expenses of our school exhibition.'

Like his neighbours, Nathubhai's concept of the function of a school is narrow. It is only a place to learn to 'read and count'. Naturally he regards education as expensive and regrets the time that his boys must spend in school. Once the village school becomes more of a service agency, calling the children for say three hours a day for both 'learning' and for guiding them during the remaining hours in such productive work as village sanitation, gardening and handicrafts, he will see it as a helpful ally in solving other problems than illiteracy alone.

'What one thing do you consider the most important for improving the economic condition of your people?' we asked.

Some of his neighbours had given various answers. Some wanted capital at lower rates of interest, others wanted more land and still others, better prices for farm produce. But Nathubhai had pinned his faith to education.

'Send the children to school', he replied. He justified this position by paying out Rs 4 a year for books and supplies, over four times as much as the average family.

LIMJI

Limji took a less liberal view, regarding education as something not meant for him or his people. He is a share tenant, about thirty-five years of age, with a wife and three living children.

'Neither my wife nor I ever attended school. That is not for us. Our children will do the same

work we are doing and for them education is not necessary. For those who have time and can afford it, education is all right.' Later however he surprised us by saying that something ought to be done for the many children who must spend so many hours in idleness about the village.

He lives near a town where many stray cattle roam about at night. When we asked him what he considered most essential for improving his situation he wanted Government to pen up the stray cattle more rigidly than is done at present.

Later we visited the teacher and the school. There were only four girls present though twenty-eight were on the rolls. When the school closed for an hour at noon, some of the children went home for some lunch. But perhaps half of them lingered about the school.

'It is not their custom to have food at noon', the teacher said. More than half of the children received food only twice a day, one meal in the forenoon before coming to school and another late at night. Food consisted chiefly of grains with slight quantities of pulse or cooked vegetables. Fresh fruits and milk were almost unknown in their diet.

We then turned to the teacher. 'If you were to have your wish as a teacher, what would it be?'

He was quiet for a long time. Then he took a badly worn register from a box beside his table. 'The attendance is very irregular.' He turned the leaves of the book while he told us his story of irregular attendance.

‘September and October are very bad months. There is much sickness then. I visit in many of the homes and supply medicine at cost, and sometimes free. Others are just careless and do not come for that reason. Parents go to the fields all day and the children do as they choose. Others are kept at home for work.’ He showed us the records for February and March. ‘In this school many children are kept out to help with the harvest. Those who cannot go to the fields remain at the house to care for the stock and the younger children. The children leave school at too early an age. As soon as I get them to a point where they can begin to learn effectively they leave to work at home.’

CHAPTER EIGHT

ILLNESS AND HEALTH

LIKE indebtedness the farmer speaks freely of illness, because he is so familiar with its ravages.

'We have five children', said Bhavlo. 'Three or four died in their infancy. The village dai usually attends my wife at the time of delivery. We pay Rs 2-8-0 for her help in the case of a boy and less for girls. If there is no money in the house she will wait, or accept grain as pay.'

'There is much illness but fever troubles us most.'

'What kind of fever?' we inquired.

'Two or three kinds. Plain fever is the most common. It just begins and the body remains hot for several days. It is often less in the morning. There is also four-day fever, which remains for a very long time.'

'Fever may come at any season but it is more prevalent at the close of monsoon. We think it is caused by the change of weather. As the rains stop and the weather becomes warm, fever increases. Then again, in winter it comes when the weather is cold. During the hot summer months we are troubled the least.'

Where physical resistance is low changes in climate may render the body more susceptible to attack from fever infections. A sudden rise or fall in temperature, or exposure to rain with the resulting

chill may be all that is necessary to break down the resistance that may remain and fever begins. So Bhavlo's observation is correct, even though he may not see through to the immediate cause of fever.

'We have no one special remedy for fever', he said. 'It usually goes of its own accord after some days. If it is severe or lasts long we may get medicine from the dispensary. But that is nine miles away and they can give us enough medicine for only two days at a time. There is a vaidya in the second village beyond ours. He dispenses roots and herbs. But we depend chiefly on home remedies.'

To our question as to the probable number of school and working days lost because of fever Bhavlo and his wife both replied, 'Many'. I have been in their village frequently and would agree that their answer is about as definite as we could expect. Fever is more a sapper of strength than a killer and even though a man may be able to walk to his fields, or his children go to school and sit there, the presence of malaria germs in the blood stream destroys vitality and prevents their doing satisfactory work.

'Next to fever would come dysentery', he said. 'Dysentery occurs chiefly during the monsoon and early winter. People say it is caused by strange water and by work in the fields when it rains. If the clothes become wet and one chills, dysentery may begin. We depend on home remedies, though I have bought medicine in the town several times.'

It is only through questioning that the people's opinions in regard to the causes of illness are revealed.

To the average person illness just comes and there is little that can be done to prevent it. This attitude is largely responsible for the indifference toward prevention and medical aid. Very rarely is medical aid sought in the beginning and only in severe cases is outside help resorted to at all.

Next to dysentery he named cholera. Due chiefly to vigilance on the part of Government, outbreaks of cholera are much less common than formerly. But there were scattered cases in the area at the time of our inquiry, which may explain why cholera was given third place. Even though cholera is comparatively rare the people remember its earlier ravages and still fear it.

'Snake-bite frequently occurs during grass-cutting, although a snake may turn up at any time and place. The people seldom kill them. Our houses offer very little protection against snakes as there are many hiding-places.

'Many villages have someone who knows the art of removing snake venom by grasping and sucking the wound. His services are free, but we often give him a present some days afterward. It is not the custom to call him directly, when he is needed. When someone is bitten the people may begin to wail and shout. Hearing the noise he comes of his own accord. Apart from any help he may give we use only home remedies for snake-bite.'

We then called on the village exorcist, commonly known as the *bhuva*. He is often the devotee of a local temple and considered able to appease offended spirits. His services may be sought espe-

cially in cases of severe and prolonged illness or financial misfortune. In private life he is a farm labourer. He was reluctant to speak but he listened with quiet interest while Bhavlo and other neighbours told something of his work.

Most of the people believe more or less in his power, but they come to him less each year. Sickness in the family, failure of a buffalo cow to give milk and the sickness or death of livestock are some of the problems brought to the *bhuva*.

Some clients come with a sincere desire to get help. Others come because they fear more serious troubles if they stay away. It is believed that the *bhuva* has power to bring either blessing or misfortune, and it is safest to cultivate his goodwill and remain on good terms with him.

'The people must not tell their trouble to the *bhuva* direct', said Bhavlo. 'He may know something of it indirectly before they come. When seeking help they sit within hearing distance of him and relate their problem to some third or imaginary person.' He charges no special fee but as a part of the ritual some sort of present—a rupee, a bottle of liquor, a chicken or even a goat—is brought and placed nearby.

In reply to our question we were told that the *bhuva* shows no concern or displeasure if the people seek medical aid from the Mission hospital or Government dispensary. Nor does he refuse help to those who may have no reward to give him.

From Bhavlo's statements we learned that he had spent between two and three rupees during the

year for the help of the vaidya and the purchase of medicines. Vaccination for small-pox is a free Government service and, while not compulsory, it is generally done for babies within the first few months after birth.

We visited the village of Raipur during September. There are sixty-two homes in the village, and in seventeen of them one or more members were ill. In one family of seven all but one young man and the aged grandmother were down with fever. They had no medicine and there was no money in the house with which they could have purchased it.

Even though it was one of the busy seasons of the year, no one had been able to work in the fields for three days, and there was little hope of getting there soon. A house to house round was made among the 355 people of the village and we found:

Fever	..	..	18 cases
Dysentery	..	..	6 "
Sore eyes	..	..	5 "
Skin diseases	..	..	22 "
Other illness	..	..	3 "

The above are those who did not feel well enough to be at work, or in school in the case of children. A patent remedy for fever was available at a local store to those who had money or credit. It is noteworthy that at least three-fourths of the illness might have been prevented. The economic cost of such an amount of illness during a busy season of the year is a burden that the people can ill afford.

Malji was a young man about twenty years of age in a home where three members were down with fever. 'It comes this time of the year, but there is less in the summer time.' He introduced his younger brother, suffering from an advanced case of scabies. In discussing the cause of it he revealed that they had not worried much about that, assuming that it was the result of bad food or something in the blood. Its nature might lead any untrained observer to suspect that.

In another village the Mission teacher keeps a small first-aid kit and supplies medicines to the people at cost. 'The children learn quickly and take an interest in finding out the causes of fever and other kinds of sickness. We study in the school but it is more helpful to take the older children out and let them find the breeding-places of flies and mosquitoes for themselves. That is the best way to help the parents too', he said. 'Merely to make a speech against disease does not have any effect. If quinine for fever is near at hand, so that they may buy a few pice' worth just as they can afford it, fever may often be stopped before it becomes serious.

'The children have learned the cause and method for treating scabies. If I keep reminding them they will take home small amounts of sulphur and we have very little trouble from that source any more.'

We asked Ramanlal the teacher what he considered the most essential steps for lessening the burden of sickness among the poor people of his

year for the help of the vaidya and the purchase of medicines. Vaccination for small-pox is a free Government service and, while not compulsory, it is generally done for babies within the first few months after birth.

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PART TWO



PART TWO

THE FARMER SPEAKS

TABLE I

Farms Classified According to Size

Size of Farm in acres	No. of Farms	Percentage of Total No.
30 and over ..	7	3.7
25-29 ..	7	3.7
20-24 ..	17	8.9
15-19 ..	24	12.5
13-14 ..	13	6.7
11-12 ..	30	15.6
9-10 ..	36	18.8
7-8 ..	30	15.6
5-6 ..	20	10.4
4 ..	4	2.1
3 ..	2	1.0
2 ..	2	1.0
TOTAL ..	192	100

103 owned some land. The average amount was 8.5 acres. The average size of farm for those who cultivated only their own land was 13.5 acres. Those who supplemented their land by renting owned an average of 5.1 and rented on an average 7.7 acres.

PROPORTION OF LAND MORTGAGED

Of the land owned, 71% was under mortgage. Only 29% was free. This of course changes the picture of ownership as presented above but the status of actual ownership is still less favourable. We inquired in each instance as to the amount of mortgaged land that the owners expected to redeem. Very few saw any immediate hope of recovering the title to their land. An officer of the District Co-operative Institute replying to the same question replied, 'Very little. Once mortgaged, land usually goes.'

The amount of land given as collateral was often excessive in comparison to the size of the loan. The case of one illiterate farmer is so typical of many that we record it here. He said, 'I borrowed Rs 300 from the lender in 1926. As security I gave my ancestral land, about eleven acres. It was then worth Rs 1,400. Because of several bad years I could not pay all the

interest. The rate was four annas per rupee annually. In 1929 the frost destroyed my crops. I paid nothing on the interest and, instead, borrowed a little grain for food and some money for taxes and clothing. After 1929 I again paid nearly all of the interest. The accounts all remained with the lender.' The man was astonished when in 1936 his creditor foreclosed with a case involving all of the land and in addition his yoke of oxen and cart. Very likely he had borrowed more than he thought he had and probably actually paid less of the interest than he had estimated. However, this is a clear case of extortion where the system of credit is as much at fault as any particular person. The farmer now works as a labourer for three annas per day, on land which was once his own.

Sound counsel is that men in need of cash should sell a small piece of land to get it and not mortgage land which is often worth several times the sum involved. Moneylenders are inclined to use the present unsatisfactory system of credit as a means of swelling their estates through foreclosures.

Our study reveals that while a man may climb the agricultural ladder from the status of labourer to owner, he can much more easily descend again to the status of labourer by mortgaging his land.

The farmers claimed ownership of 29% of the land they operated, but if we could calculate their actual equity in mortgaged land this figure would be much reduced. On the basis of opinions expressed 14% would be a safe estimate of the amount of land actually owned by the operators.

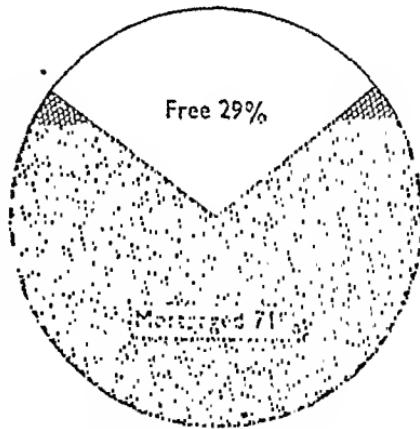


Figure 11 Mortgaged and Free Land

TENANCY: KIND AND AMOUNT OF RENT PAID

Of the 192 farmers interviewed 151 rented some land. 89 depended upon rented land entirely and 62 were part

THE FARMER SPEAKS

owners, who owned land but rented additional fields. Approximately 80% of all rented land was on a crop-share basis. 20% was rented for cash. The rented land generally belongs to non-cultivating landlords although a certain amount is owned by local craftsmen, such as carpenters, barbers and small merchants.

THE RENT CONTRACT

The use of a written agreement is general. There is a printed form for share renting and one for cash renting. A copy of each in free translation is given below.

Half-share Rent Contract

The Lessee _____ has taken the following land under the considerations named below, for the season of _____

I have taken the above land on _____ share basis on the conditions named below:

1. I will plant the crops according to your instructions and if I do not fulfil the conditions of the contract I agree to compensate you for any loss that may occur due to any failure of mine.
2. Any crops produced, including grain, green grass, dry hay, will be delivered to whatever place you require. I will pay you for any expense incurred in guarding the crops. When the crop is ready, after deducting any amount due to you and the Land Revenue _____ I will take what remains only in your presence. I will not take it without your permission and I further agree to deliver your portion of the crop to whatever place you indicate.
3. I do not object if you take from my share any amount due to you on old indebtedness. I further agree that I hold no claim on trees of the above land nor on any new trees which may appear.
4. I will keep the hedges, boundaries and land marks in good condition, according to rule. Failing to do that I am liable to any fine that Government may impose.
5. I will keep the land free from weeds, trash, etc., from one corner to another, making it fit for cultivation. Failing to do this, you may have the work done at my expense.
6. I agree to pay Rs. _____ at harvest time for the green grass around the borders of the field.
7. When the crops are ready I agree to harvest and thresh them in your presence, and having divided them, your portion will be delivered to the place you order. I will in no way damage your portion of the crop. I will pay you for land revenue Rs. _____ (date).
8. I will not sub-let any of the land to another.

THE FARMER'S LAND

9. I am responsible for guarding the crops, grass and any fruits. In case any damage may occur, I am responsible.

10. I shall have no claim on the land due to my having applied manure, nor shall there be any claim because of clearing the land from weeds, brush or trash. I will willingly return it to you on_____.

11. If I should borrow or hire oxen or implements from you for cultivating the land I will pay the amount fixed by you. When cultivation is completed I will return all the implements to you willingly. Furthermore, I agree to pay you for any advance of seed, pasture, feed, food grain, etc., made in connexion with the farming of this land.

Signature of Tenant

Signature of Witness

For cash renting, the following contract form is used.

One-Year Rent Contract

1. In consideration of me or my heirs paying to you the following amount, Rs_____ on_____ (date) I take the herein-described land from you for cultivation.

If I do not pay the above sum to you by the appointed time I agree to pay interest on the amount overdue at_____ per cent.

2. Whether I farm the land or leave it idle, entrust it to another or if the crop fails entirely, I am responsible to pay the above sum on time, without hesitation. I am also bound to pay the cost of any legal proceedings that may be taken against me for non-payment.

3. If you desire, you are at liberty to take possession of all the crops on this land, sell the same to recover the amount due you and turn over any balance to me.

4. You have full claim to any trees, newly grown trees or the fruits from the same. I will not damage any of the trees nor allow anyone else to damage them in any way. I am responsible for any damage to the trees.

5. I will repair the hedges and keep the borders and land marks in good condition. If I fail to do this, you are authorized to have the work done at my expense. Moreover, if there should be any Government fine for failure to keep the land marks in order I am bound to pay it.

6. I agree to turn the land over to you on_____ (date), after cleaning it from all roots, trash, cotton stalks, etc.

7. At the close of this contract I agree to turn the land over to you without making any claim for it.

8. I shall have no claim whatever to the said land until a new contract is made.

Signature of Tenant

Signature of Witness

THE FARMER SPEAKS

Originally both contracts were prepared by landlords. Consequently they are weighted heavily in their favour and the tenant is bound hand and foot. Reading them gives one the impression that the sower is a lamb, helpless without the arm of the law. The tenant is assumed to be short-sighted and dishonest.

A contract to be honourable ought to have at least several provisions for mutual agreement and arbitration. Among these should be:

1. A provision for compensating the tenant for unused portions of manure or permanent improvements such as draining or levelling of fields, which would be left behind in the event of his giving up the land.

2. The tenant should be given first preference in renting the land for the following year, provided he fulfils his contract.

3. Provision should also be made for arbitration in deciding the amount of rent and for determining the nature and amount of cash payments in years of crop failure, when Government remits a portion of the land revenue to land-owners.

Under the above form of rent contract, the tenant at best is only a temporary fixture on the land. He has no reasonable assurance of continued occupancy and has to sign over all claim to any compensation for manure applied, or permanent improvements made. So instead of any constructive policy of soil conservation the tenant usually just crops the land from year to year.

Formerly, with land rented on a crop-share basis it was customary for the owner to furnish the land, and sometimes half the seed and manure, if any was used. The tenant furnished half the seed, sometimes manure and all of the labour. Each received an equal share of the crops produced. In recent years, more notably since 1932, it is becoming customary for the tenant to furnish all the seed and labour and pay up to half the land revenue also. Of the 120 men who farmed land on a crop-share basis 87 paid up to half the land revenue.

Farmers were given the opportunity to discuss the rate of rental. That is, whether it is increasing, decreasing or stable. While the question was general and it could hardly be answered specifically, it was used to elicit their opinions and experience and the replies are to be accepted on that basis. Of the 192 men, 161 believed that the rate of rent is increasing. As evidence they cited numerous cases where tenants are now asked to pay part of the land revenue. Some recalled the time when cotton stalks, hulls, etc., were left with the tenant or only occasionally taken by the landlord. They point out that these are now divided and that the tenant is required to deliver the landlord's share of produce to the market or to his house. This was not customary in earlier days. Other evidence was that tenants are asked to pay for half the manure supplied by the landlord and that they are at times required to use his oxen and pay for them, even though they have their own oxen.

Discussion of the present practice of asking tenants to pay a part of the land revenue has so far been confined to the academic consideration as to whether the land revenue as at present levied by Government constitutes a rent or a tax. Probably it is correct to say that under the circumstances land revenue is a tax on rent or on the income received in return for land ownership. Whatever the academic considerations may be it seems unjust to ask the tenant to pay half the land revenue in addition to giving the customary share of the produce.

It is said that the rise in the rate of rent is a sign of prosperity among tenants, that the profits in farming cause men to bid against each other for more land. Any who hold this view are guided by the classic doctrine of economic rent, a differential which is paid for the better lands. The argument ignores the conditions prevalent in India. With the country densely populated nearly 90% of the people must live either directly or indirectly from the produce of the soil. Cultivators are forced to pay the amount of rent asked as there is no other alternative open to them. The rise in the rate of rent therefore, whether in actual cash, share of the crop or increase in services that the tenant is asked to perform for the landlord, may more accurately

THE FARMER SPEAKS

be called the result of poverty and population pressure on land rather than agricultural prosperity.

RENTING FOR CASH V. CROP-SHARE

Those able to get sufficient capital to finance their farm operations and who can stand the financial shock of lean crop years usually prefer cash renting. They give as reasons:

1. 'The tenant has more left after the rent is paid.'
2. 'He can grow whatever crops he likes.'
3. 'Cash is more simple. There is less possibility of trouble at the time of settlement.'
4. 'If a farmer works hard to increase the yield of crops he gets the full return from his labour.'

A few saw in cash renting a better chance for keeping 'out of the hands of the moneylender'. It was our observation that men of superior ability more often preferred cash renting.

Those who preferred crop-share renting frequently mentioned as reasons:

1. 'It is safer in case of crop failure or falling markets. Given a lean year, both landlord and tenant share the loss.'
2. 'Crop-share renting gives the tenant a "connexion" with the landlord. He can borrow money for operating and household expenses when needed.'

Share tenancy is more subject to abuse than is cash renting. Under cash renting the amount to be paid is clearly stipulated. The tenant is more likely to enjoy the privilege of marketing his crops when and where he chooses. Under crop-share renting crops are almost invariably delivered to the landlord's store house. The tenant is often indebted to the landlord for money, seeds and petty loans. As the landlord keeps all the accounts, the division of crops is often an occasion for misunderstanding, ill-feeling and disappointment.

Under present circumstances tenants change land frequently and there is little inclination to use manure, grub out shrubs or prevent erosion. The result is progressive depletion of the soil

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and a low yield of crops. The tenant, dissatisfied, thinks he can do better with another landlord, and the landlord often welcomes an opportunity for trying a different tenant, both failing to realize that to a large extent it is the type of tenancy which is at fault. Tenants deeply indebted to their landlord sometimes grind along year after year on the same land, as a condition of indebtedness prevents their making a change.

It cannot be said generally that one form of renting is better than another. Whether renting is for cash or crop-share the relation of landlord and tenant to each other and to the land is of more importance than the form of rent paid.

SCATTERED LAND HOLDINGS

A survey number was originally the amount of land necessary for a family and a yoke of oxen. Due to the steady increase of population and the application of the laws of inheritance the situation has greatly changed. In dividing land among heirs it has been customary to give to each a proportionate share of every item. A father in dividing land among his sons would give to each one portion of each field. Consequently we find holdings badly scattered with some fragments of farm land as small as one-fortieth of an acre. The increase in population and the lack of capital have also led to the use of smaller and smaller units of cultivation.

None of the farmers had his land lying in a single block or tract. The average farm was cut up into 4.6 different fragments or small fields with land belonging to other people coming between. The largest number of fragments was 14 for a farm of 35½ acres. The land of this farm was scattered over three different villages and the average area per field was 2.7 acres.

This being a dry-farming tract the problem of small and fragmented holdings is less acute than in some areas of India, where holdings as small as 1/40th of an acre or less are found. However, the average farm studied had 4.6 different fragments scattered over the countryside which in itself presents some serious difficulties.

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TABLE II

Degree to which Land is Subdivided

Average size of Farm in acres	No. of Fragments in Farm	No. of Farms	Percentage of Farms
35	14	1	.5
25.5	12	1	.5
23	11	1	.5
22.5	10	3	1.6
19.5	9	7	3.7
22.3	8	13	6.8
22.4	7	11	5.8
14	6	19	9.9
12.3	5	28	14.7
10.8	4	37	19.5
9	3	41	21.5
8.4	2	23	11.2
3.5	1	7	3.8
		192	100

FARMERS' OPINIONS

What does the farmer himself think about scattered holdings? One hundred and fifty replied to the above question. The more specific opinions are given below in the order of their frequency:

1. 'There is too much difficulty in guarding and harvesting crops.'
2. 'Land is too far away, takes much time for going and coming.'
3. 'Controversy arises over waterways and boundaries. Farmers often trespass on each other's land.'

To the above may be added what is probably the most essential point that the farmer, whether owner or tenant, cannot take pride in his farm and develop it efficiently if the land is scattered in half a dozen different places. Scattered holdings discourage the keeping of livestock and the use of manure, both of which are essential to soil and crop improvement. With livestock kept at some central place, remote from the land,

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there is a strong tendency for manure to be burned as fuel or wasted entirely. Also, the fields are often irregular in shape with no roadway leading to them. This discourages the use of improved farm machinery.

POSSIBILITIES FOR CONSOLIDATION

'Do you prefer having your land as it is now or would you rather have it in a single block?' This question was asked of all farmers interviewed. There was no discussion as to the methods by which consolidation might take place and replies were limited to mere statements of whether they favoured consolidation or not. Their opinions follow:—

<i>Farmers' Opinions</i>		<i>Number of Replies</i>
No, it is impossible	..	3
Desirable and would co-operate	..	5
Is desirable	..	155
Not desirable	..	22
Uncertain	..	7
TOTAL	..	192

A common objection to consolidation is that scattered land means less risk of crop failure. With land scattered in different places one field may suffer from flood, frost or drought while fields in another locality might escape. Again, a farmer can have different kinds of soil, such as 'cotton soil', 'wheat soil' and 'rice soil'. This facilitates the diversification of his crops. But the slight advantage hardly justifies the waste resulting from small and fragmented holdings.

In the case of ancestral land personal attachment is strong. An owner may speak in favour of consolidation but his attitude at once changes when discussion turns toward his own land. He would like consolidation if it could be accomplished without his having to exchange any of his fields for those of someone else.

HOW SCATTERED ARE HOLDINGS?

The question often arises as to just how large a factor distance is. How far is the average farmer from his land? In each case we estimated the distance the farmer would travel in

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In asking the questions we could not take account of the varying degrees of efficiency among farmers. One may live well on a given amount of land while another may fail. Also, there are various levels of living and we had to allow each one to interpret the words 'support your family' in his own way. So by allowing for variation the replies give us the desired information. The results follow:—

<i>Availability of Land</i>	<i>Number of Replies</i>	
Cannot get amount of land needed	145	
Have enough land	42	
No reply	5	
TOTAL ..	192	

Seventy-six per cent reported inability to get necessary land, at least on terms that would make farming profitable. Twenty-one per cent had suitable land and three per cent expressed no opinion.

Each of the men also expressed his opinion as to the amount of land he needed, keeping in mind his present equipment, type of land and the size of his family. Their replies range from 6 to 50 acres and suggest that the average farm should have 18.5 acres. This would mean an increase of 50% in the size of their present holdings.

With the increasing pressure of population on land there is much discussion as to what constitutes the minimum amount of land necessary to support a family. Estimates made for different areas range from three to sixty acres. No estimate can be of much value unless we take into account such factors as soil fertility, type of farming, prices of farm produce and the level of living to be maintained. Obviously the farm should contain enough land to give employment to the family and at least one yoke of oxen. The farmers asked for a minimum of 18.5 acres, or 50% more land than they now have. This is the amount of land that a yoke can handle efficiently in this area and we regard their estimate as reliable.

But population pressure for land makes its attainment physically impossible. As irrigation is extended it will be

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necessary for the Indian farmer to turn toward more intensive cultivation. Viewing the limited supply of farm land the Royal Commission of Agriculture in India observed, '... as a general principle it may be laid down that the chief solution for the problems of the cultivator lies in promoting the intensity and diversity of his agriculture'.

We asked another question: 'If you were to purchase land, on what terms could you get it?'

Very few had in mind any source of credit except the local lender. The Land Mortgage Bank was not mentioned by any one as a possibility and only three mentioned Co-operative Credit Societies as a possible source of help. The 186 who mentioned the private lender anticipated paying an average of 12% interest per annum. The lowest rate of interest mentioned was 9%, while eight thought they would need to pay 25%!

The average value for all land under study was Rs128 per acre. The best land was valued at Rs285 per acre and the poorest at Rs50. The average value of land farmed by the owners was Rs136. Land rented for cash was worth Rs129 and that rented on a crop-share basis was worth Rs126.

'COMPANY FARMS'

The past ten years have witnessed the formation of a new kind of enterprise known as the 'company farm'. Some men who have acquired large tracts of land through purchase and foreclosure have begun to manage the cultivation through employed agents and labourers. This is a radical departure from the customary method of subdividing estates into a number of small tenant farms. Such farms, even though small, provided employment for the tenants' families and sometimes a hired labourer or two during much of the year.

Organized more rigidly, the company or consolidated farm hires all of its help and that only at certain seasons. By paying more than the current rate they can call out large numbers of men and oxen and complete the farm work within a relatively short time. Consequently, there is steady employment during about three months of the year and during the remaining months

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man-days we considered only the major farm operations, such as planting, cultivation and harvest. Time spent in guarding the crops and occasional visits to the fields for odd jobs was not included.

Labour Requirements for producing 10 acres of Cotton, 5 acres of Sorghum and 1 acre of Legumes ; Number of Man-Days shown by months.

<i>Crop</i>	<i>Jan.</i>	<i>Feb.</i>	<i>Mar.</i>	<i>Apr.</i>	<i>May</i>	<i>June</i>	<i>July</i>	<i>Aug.</i>	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Dec.</i>	<i>Total Days</i>
Cotton ..	1	22	60	60	20	12	30	26	15	9	4	0	259
Sorghum..	4	28	10	5	0	3	6	7	9	9	5	2	88
Legumes..	1	12	5	0	0	1	1	3	2	3	1	0	29
TOTAL ..	6	62	75	65	20	16	37	36	26	21	10	2	376

Figures given in this and subsequent tables are for the year 1937-8. Since the time of the different operations will vary from year to year the tables must not be considered as an agricultural calendar.

Cotton provides considerable employment during six months of the year. The average number of man-days required per acre was 25.9. The year 1937-8 was a year of sub-normal but evenly distributed rainfall. Therefore the number of days spent in weeding during July, August and September is less than it would otherwise have been.

Number of Yoke-days required for producing 10 acres of Cotton, 5 acres of Grain Sorghum and 1 acre of Legumes.

<i>Crop</i>	<i>Jan.</i>	<i>Feb.</i>	<i>Mar.</i>	<i>Apr.</i>	<i>May</i>	<i>June</i>	<i>July</i>	<i>Aug.</i>	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Dec.</i>	<i>Total Days</i>
Cotton ..	0	1	3	4	2	15	16	12	6	8	1	0	68
Sorghum..	3	4	2	2	1	3	4	3	9	10	2	0	43
Legumes	0	3	1	0	½	1	1½	2	1	½	0	0	10½
TOTAL DAYS													
PER MONTH	3	8	6	6	3½	19	21½	17	16	18½	3	0	121½

PRODUCTION OF CROPS

For the average farm 6·8 yoke-days were required per acre of cotton. Approximately two-thirds of the yoke labour occurs during monsoon months.

TABLE III

Cost of producing 1 acre of Cotton, season 1937-8. Items arranged seasonally.

Items		Cost ¹		
		Rs	As	P.
1 Repairing hedges	0	2 0
2 Two summer harrowings	1	0 0
3 One ploughing	1	8 0
4 Harrowing after first rain	0	12 0
5 Sowing or planting	0	6 0
6 Cost of cotton seed, 5 lb.	0	5 0
7 Inter-culture, six times	3	8 0
8 Thinning the crop	0	3 0
9 Weeding by hand, twice	2	8 0
10 Watchman	0	4 0
11 Picking, 8 md at As4	2	0 0
12 Cartage	1	4 0
13 Taxes and toll	0	12 0
14 Uprooting and removing cotton stalks	1	4 0
15 Land assessment	2	12 0
TOTAL		..	18	8 0

The average cost of producing an acre of cotton for certain farms during 1937-8 is shown in Table III. Land assessment is included but there is no charge made for investment in land.

Thanks to the untiring efforts of the Government, new cotton varieties have been greatly improved and seed is furnished to all cultivators from supply stores. Special attention has been given to the factors of wilt resistance and ginning percentage in the breeding of new varieties. Broach District No. 8 cotton, now being used extensively, has high wilt resistance but unfortunately its ginning percentage is low. Further persistent efforts have resulted in the development of new types which

¹ Oxen Re1 per yoke-day, driver As8 per day and common labour As4 per day.

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promise a combination of both high ginning percentage and the wilt resistance of B.D. 8.

There is a tendency for farmers who have black cotton soil to grow cotton year after year. In other areas cotton often follows jowar. Some of the more well-to-do farmers of the Broach tract have a commendable system of leaving a part of their land in fallow each year, but economic pressure prevents that practice by men in this group. The soil is cultivated during May and the seed is often sown in early June before the first monsoon rain falls. At least 95% of the cotton on the farms studied was drilled in rows. A common mistake is to drill the seed too thick. The plants are seldom properly thinned so the yield is reduced.

On the school farm¹ good results have been obtained from planting seed in squares 3 ft \times 3 ft. Five seeds are planted and later the plants are thinned out so that only two per hill remain. In order to plant the seed evenly a wire marked at 3 ft intervals is stretched across the field. Workmen follow the wire as it is moved forward, each dropping seed for two rows at a time.

Local gins compete with each other in buying the farmer's cotton. Gin owners send out their agents (dalals) who receive Re 1 per bar (960 pounds) and where there are two or more gins there is often keen rivalry. A considerable amount of cotton is sold in advance, the price being fixed some days or weeks before it is delivered. The farmer then stands to gain or lose, depending on the price the day he delivers.

The first cotton sale of the season often provides an occasion for pageantry and rejoicing. As the time for cotton harvest draws near the local gin owner consults the astrologer as to the auspicious time for making the first purchase. The date decided, a prize is offered for the first cart that arrives. An invitation goes out and often as many as two hundred farmers are present for *mahurat*, the opening ceremony.

The first cart, sometimes bedecked with garlands, is drawn onto the scales and the price for the day is announced. The gin

¹ Vocational Training School, Anklesvar, Broach Dist.

PRODUCTION OF CROPS

owners serve refreshments to those present. Then the selling begins. Men whose cotton is not ready may sell for future delivery. Others anticipating an increase in price may also promise cotton at the price prevailing when it arrives. At one local gin 420 bars (403,200 lb.) were sold for future delivery at the price prevailing on the opening day. Another 288,000 lb. were pledged for sale at the price prevailing whenever delivery would be made.

Near the close of World War I the price of seed cotton had climbed to Rs 420 per bar, and the acreage had greatly increased. During those years there was a shift from subsistence farming toward cotton farming. Now in recent years the price has been falling until in normal years it ranges from Rs 80 to Rs 125 per bar.

Farmers having but a small amount of cotton are often placed at a serious disadvantage in selling because of mal-practices among local buyers. In one instance we found a few men selling cotton locally at Rs 2-12-0 per maund while the gin owner eight miles away was paying Rs 3-12-0. Tenant farmers indebted to their landlord are required to deliver their cotton to his warehouse. In other cases he would send his men and carts into the fields to collect the cotton, and charge for the service.

Co-operative cotton sales societies have been making progress. This is due more to the better facilities and personal attention they can give farmers than to any special increase in price. Questioned, members of the Hansot Co-operative Cotton Sales Society were free to mention the advantages as they see them:

1. 'There is less trouble than in selling privately. We take our cotton to our own place of weighing and receive the receipt promptly. At the gin we would need to wait, sometimes all day.'

2. 'There are no dalal fees to pay. Dalals sometimes harass cultivators and persuade them to sell before they are ready.'

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3. 'The price is more satisfactory. It may not be more than at the gin but the farmer feels better if the sale is made through his own association.'

4. 'We like it better.'

In this they no doubt express one of the greatest advantages from co-operation. It is a form of education. There is valuable experience and a feeling of pride in the management of an enterprise that is their own.

A notable improvement taking place in cotton production is the use of the stalk puller which lifts out the main part of the root. This is a great aid in cultivation for the next crop and in controlling insect pests. Stalk pullers were rarely used on the farms in this group but as farmers see the direct benefit from their use the number may gradually increase.

Jowar (Andropogon sorghum)

Jowar is the chief grain produced. Nearly 36% of the land was given to this crop. The average yield was 15.4 maunds per acre having a value of Rs 16-6-0. The highest yield of jowar was 30 maunds worth Rs 30-10-0 and the lowest yield was 9 maunds worth Rs 9-11-0.

Since the price of cotton has fallen the value per acre for cotton and jowar is nearly the same. At prices prevailing in 1938 cotton was worth Rs 24-12-0 and, including Rs 6-0-0 for fodder, jowar was worth Rs 22-12-0.

Jowar is a more dependable crop than cotton. It is less subject to the vagaries of climate and as it matures earlier it is less liable to damage by frost. The cost of production per acre is nearly the same for both crops. See Tables III and IV (pp. 81 and 85).

The Government has done considerable work toward the development of jowar varieties, but the farmers still use 'native' seed. At sowing time grain for seed is taken from the family bin. It is often badly damaged by insects which helps to explain the poor stand in many of the fields. Nearly a third of the men, not having sufficient grain in the house for planting, borrow from the local lender or shopkeeper. For the use of this they often return twice the amount borrowed. Less than 3% gave any attention to selection of seed at harvest time.

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TABLE IV

Cost of producing 1 acre of Jowar

Items		Cost		
		Rs	As	P.
1	Clearing the land of trash	..	0	8 0
2	Repairing the hedges, etc.	..	0	2 0
3	Summer harrowing	..	1	4 0
4	Harrowing after rains	..	0	12 0
5	Ploughing twice ..	..	2	0 0
6	Harrowing for seed bed	..	2	0 0
7	Drilling the seed	..	0	12 0
8	Seed, sulphur, etc.	..	1	0 0
9	Inter-culture, twice	..	1	0 0
10	Thinning the crop	..	0	4 0
11	Guarding charge	..	0	4 0
12	Harvesting, thrashing and winnowing	..	3	10 0
13	Cartage ..	..	1	4 0
14	Taxes and toll ..	..	2	10 0
		<hr/>	<hr/>	<hr/>
TOTAL ..		17	6	0
		<hr/>	<hr/>	<hr/>

Legumes

Legumes occupy a relatively small place on the peasant farms, as food, pulses and sesamum oil are almost a luxury to the farmer and the landlord finds cotton and jowar more easily divided. A few varieties of native beans are grown, but not as a main crop. Legumes when grown are often mixed with other crops. Seldom is any large amount of space given to them alone.

An upland variety of rice is sometimes grown with cotton, the seed of both crops being drilled in the same rows. Maturing first, the rice is cut away with the sickle leaving the cotton to mature alone. Rice represented 2.7% of the value of all crops. Low lands for producing the superior grades of rice are rarely available to these farmers.

Only small amounts of wheat and millet were grown. Wheat worth approximately Rs 23 per acre constituted 0.7 of the value of all crops. It is regarded as a luxury crop by men of this group and they seldom have land suitable for producing it successfully.

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are thrown into it. The pit is open to the weather and the monsoon rain helps to reduce the manure to compost. This is generally removed to the fields during the month of May. Cotton receives first preference in the use of manure.

Fodder stalks and litter are often scattered about and wasted. In one village with a population of 1,500 people, we estimated that at least 350 cart-loads of compost are lost annually by neglecting to place litter and manure in pits. In the same village manure can be purchased at 12 annas per cart-load. On this point Dr J. M. Mehta has observed, 'There is no country in the world which is so careless about its manure supply which is the food of the soil, as India'.¹

On the farms studied a total of 715 cows and oxen were kept. From the statements of cultivators 744 cart-loads of manure were conserved for use on fields. This amounts to about one-third of a cart-load per acre of cultivated land per year. One farmer who pitted his manure carefully had nine cart-loads of compost from two head of cattle. Had everyone done as well as he there would have been in all 3,217 cart-loads of manure. According to our records this amount of manure applied to the soil would have resulted in approximately Rs 16,085 in increased crop yields.²

Due to the scarcity of wood a certain amount of manure is burned as fuel, but the manure wasted far exceeds the amount burned. We found no one among the 192 men who aimed to manure his land systematically. Tenants seldom use manure on rented land unless required to do so by the landlord. If through some improvement in tenancy legislation both landlord and tenant can have more security and a better understanding than they now enjoy, the situation with regard to soil fertility and the use of manure would no doubt improve.

Four of the men had begun to use sann hemp (Indian hemp) as a green manure crop. Hemp seed is sown on land intended

¹ *The Rural Economy of Gujarat*, p. 19.

² Records kept at the Vocational Training School indicate that increased crop yields resulting from the application of one cart-load of manure may be worth approximately Rs 5.

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for jowar at the beginning of monsoon. It grows rapidly and by the end of eight weeks attains a height of 4 to 5 feet when it begins to blossom. It is then dragged down and the field is ploughed. For this the mould-board plough which inverts the soil is preferable to the wooden plough. But in the absence of an improved plough the wooden one may be used with satisfactory results. The disadvantage of the wooden plough is that the ploughing has to be done earlier without allowing the root nodules time to develop fully. As the wooden plough cannot cover the hemp with earth, it does not decompose as readily as when turned under with an iron plough. Ploughed under, the hemp provides a rich source of nitrogen and humus.

HOW TO IMPROVE CROP YIELDS

The average farmer hopes to have a good yield. The seed planted, he points skyward and says 'It is now in the hands of Bhagwan'. As the season progresses men speculate as to whether there will be a sixteen anna, a twelve anna or perhaps only a four anna yield. Low production per acre is one of the main reasons for the poverty and low level of living on peasant farms.

There is wide variation in crop yields even on soil of similar quality. Below are shown the returns per acre for two farms having almost identical soil conditions.

Cotton Mds per acre	Jowar Mds per acre	Legumes Mds per acre	Average value per acre for all crops Rs As P.
12.4	30	9.0	32 14 0
8.5	18	6.5	21 0 0

While the cost per acre may be more in the case of higher yields, the net returns more than justify the additional expense involved. With the supply of land limited the cheap labour available must be used in such a manner as to secure maximum returns per acre. Experience proves that crop yields can be greatly increased. The methods used are within reach of the average cultivator.

4 *Grow more legumes*

Legume crops occupy but a small part of the land, approximately 8%. This is far below the average of 20% for all farms in Broach District. The farmer working on a hand-to-mouth basis feels that he cannot afford to grow legume crops. Cotton is necessary to pacify his creditors and jowar is his main food. So he cuts his legumes down to but a small area for home use.

The well-to-do farmer can grow these crops to better advantage, knowing that he will receive the increase in yield from other crops in subsequent years. Whenever soil improvement becomes an adopted policy the tenant's duration of tenure will tend to increase and he will be in a better position to use such crops as hemp, tuer and vetch.

5 *Prevent erosion*

Monsoon rains cause serious damage to both rolling and level land unless adequate safeguards are used. Hemp for green manure is a good cover crop, especially if the rows are so drawn as to prevent washing. Here again, lack of capital is often a limiting factor for the low income farmer. The plugging of gullies and preparing of water-ways are jobs usually beyond his ability if he is working alone. But in co-operation with his neighbours and even a moderate loan from the Government much may be accomplished.

6 *Crops and livestock balance*

Finally, a better balance between crop production and livestock husbandry must be maintained. Under prevailing circumstances farming means the production of cotton and food grains, a policy which removes much and returns little. A larger and more secure income may be realized if the farmer will depend upon livestock and its products for at least a third of his income.

We have mentioned briefly six factors in soil maintenance and crop improvement. A beginning in any of these is within reach of the average farmer, since they do not necessarily require a large outlay of capital or additional land.

CHAPTER THREE

LIVESTOCK

WHAT is the livestock situation on the small, low income farm? Much in a general way has been said and written. As the result of inquiry we can present here a picture of both the quality and quantity of livestock in use. We include also supplementary information on local practices in the care of livestock and the possibilities for improvement.

Oxen

The use of power machinery is almost unknown in India. With farms small and fields scattered and irregular in size oxen offer the most suitable form of power available at present. Whether the farmer can use improved implements or not depends on his ability to get suitable oxen for drawing them. He may see the advantages of deep ploughing and a more thoroughly prepared seed bed but with his puny oxen he is helpless.

On the farms studied there was one yoke of oxen for every 11.2 acres of land. The average value per head was Rs43. The best yoke was worth Rs195. Sturdy and vigorous they easily handled the work on 16½ acres of land. The lowest priced yoke was valued at Rs40 and the owner attempted to

<i>Kind of Livestock</i>	<i>Value per Unit</i>		<i>Average Value per Farm</i>	
	Rs	As P.	Rs	As P.
Oxen	43	10 0	98	12 0
Cows	21	4 0	24	5 0
Buffaloes	48	5 0	15	5 0
Goats	3	14 0	3	14 0
Fowls	1	3 0	2	15 0
TOTAL			145	3 0

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pasture they can pick up. Calves as they grow up show the same half-starved appearance as the native cattle and they mature slowly. When old enough to work they are given better feed and even though stunted they will develop into far better oxen than those of the native herd.

There are several obstacles to the improvement of cattle through breeding. Backward-class people are hindered in building up herds by the lack of capital. Men who do have money and could give a lead in private breeding are deterred from carrying out selective breeding by orthodox religious views. As a result it is often only the poor who keep cows. All calves born, however inferior, are allowed to live until they die of neglect. Comparatively few cows reach mature age. Survival of the fittest rules in most herds and many starve without ever breeding. Even though a premium bull may be available his influence is to a great extent dissipated in such a herd.

In one village a group of fifteen men each having a cow or two co-operated in the purchase of a stud bull for their own cattle. This is preferable to having a bull run with the common herd. At a relatively low investment they have improved the quality of their young stock. Kankrej oxen are worth about Rs160 each and the cows average Rs50 each. This is at least twice the value of ordinary stock.

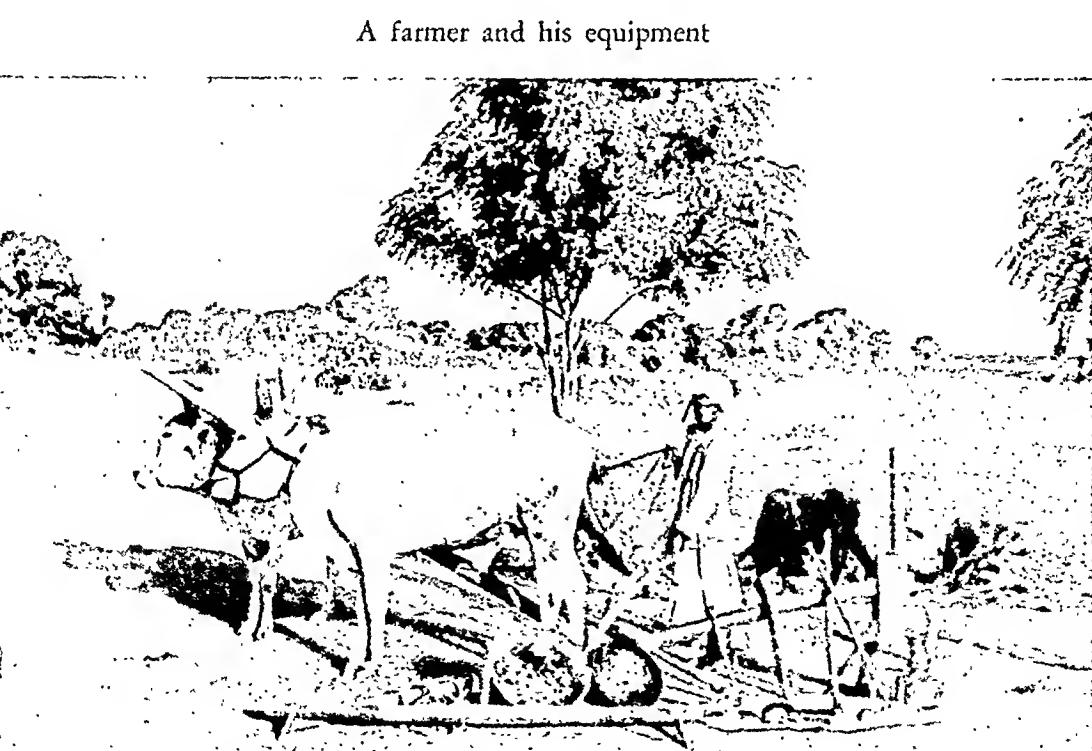
The improvement of cattle through breeding is almost unknown among the men of this class. At present they spend almost their full time in the production of cotton and cereal grains, of which there is a relative surplus. If they were to turn more attention toward the production of feed and the improvement of livestock they would find a new source of income and the returns from the usual field crops would be more secure.

Cows

Cows are kept chiefly for the male calves they may produce. Milk receives only slight consideration. The average cow produces about 260 pounds of milk, in addition to that consumed by the calf. Many cows are barren. Others, often due to lack of feed, give birth to a calf only once in three or more years.



A Kankrej herd bull (see p. 95)



A farmer and his equipment

LIVESTOCK

One farmer whose cows produced neither milk nor calves took comfort in the fact that he at least got a few cart-loads of manure each year. That they were an economic burden to him and to the public grazing ground apparently caused him little concern.

Cows subsist on the pasture and any coarse fodder they can find. Grain is fed for only a day or two following parturition. Even so, the vast amount of pasture and forage consumed by worthless cattle constitutes a major economic loss. Cows on the farm studied were worth an average of Rs21 each.

Buffaloes

Under existing circumstances water buffaloes are superior to cows in milk production. Records received for six of the better buffaloes showed an average of 2,100 pounds of milk per lactation period. Buffalo's milk is richer in butter fat than cow's milk, and as the diet of the people is generally deficient in fat buffalo's milk is preferred. There were in all only 61 buffaloes on the 192 farms, having an average value of Rs48 per head.

Along with oxen on work, buffaloes are given preference in feeding. They are fed chiefly on hay and fodder but will reward better care if it is given.

Milk and Butter

Only small amounts of fluid milk and butter are available for consumption. In one village having a population of 794, thirty-two pints of milk were consumed daily during December. This amounts to three-quarters of an ounce a day per person. The average *per capita* consumption during the year would hardly exceed half an ounce daily. In a survey for 320 backward-class school children in different villages, less than 2% received milk to drink regularly. India has more cattle per square mile than any other country in the world. Yet, in perhaps no other country is there such an acute shortage of milk. With no substitute for milk the level of nutrition is low.

Goats

On the farms there were in all 190 goats worth approximately Rs4 each. They are valued chiefly for skin, meat and hair, but

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the number of families who depend on goat's milk as a food suggests the possibility for improvement in this line.

One farmer who reported an annual income of Rs28 from goats had sold milk worth Rs9-10-0 from one of his best does. Goats are relatively free from disease and thrive on leaves and vines which are generally available free. This should give them a larger place on farms than they now hold.

No special breeds of goats are recognized but the Imperial Council of Agricultural Research contemplates the opening of breeding experiments in an effort to develop two types, one for milk production and another for meat.

Poultry

Eighty per cent of all the farms kept some fowls. Due chiefly to the prevalence of diseases and enemies, such as jackals, weasels, snakes and hawks, the number kept is much smaller than it otherwise would be. Over ninety-five per cent were of the native or 'jungle' variety. The others were of improved breeds, chiefly Rhode Island Red. There were in all 475 fowls valued at Rs1-4-0 each. The income from poultry and eggs sold was Rs612-12-0. The ratio between the amount invested and the income is much more favourable in the case of fowls than for other livestock. This is significant when we realize that farmers do not incur much expense in the feeding of fowls. However, those having improved breeds are learning that proper feeding will result in a higher egg yield.

Eggs are sold locally or to buyers who travel from village to village and pay cash. Native eggs averaging under $1\frac{1}{2}$ ounces in weight sell for four annas per dozen. In a few areas the eggs are packed in earthen jars and shipped to the city for sale, where they are worth about nine annas per dozen. Very little attention is given to the freshness or quality of eggs sold. One merchant, perhaps more scrupulous than others, labelled his baskets of eggs offered for sale as: Large eggs As9 per dozen, small eggs As6 per dozen and fresh eggs As10 per dozen.

Poultry husbandry offers more immediate hope of economic relief to farmers in this class than other farm enterprises. It has

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frequently been recommended as a cottage vocation supplementary to farming. One can begin with a small investment, the returns come soon and there is a growing demand for the products. With this in mind several experiments in the cost of producing fowls and eggs under scientific management have been conducted on the Vocational Training School farm.¹ One phase of the experiments was to determine as nearly as possible what financial returns might be expected from keeping fowls under improved conditions. The results, in part, follow. The figures represent flock averages for the three breeds under trial. By 'country selection' is meant birds of the native stock selected as being superior to the common average in size and appearance.²

Egg Production, December 1, 1937 to May 31, 1938

<i>Breed</i>		<i>Average No. of Eggs per Hen per Month</i>	<i>Average Weight of all Eggs Produced</i>
Rhode Island Red ..	..	13½	1-7/8 oz.
White Leghorn ..	..	11½	1-3/4 ,,
Country Selection ..	..	7½	1-1/4 ,,

Highest Producing Hen, December 1, 1937 to May 31, 1938

<i>Breed</i>	<i>Total No. of Eggs</i>	<i>Average Weight</i>	<i>Total Weight</i>
Rhode Island Red ..	112	1-7/8 oz.	13 lb. 2 oz.
White Leghorn ..	94	1-3/4 ,,	10 lb. 4 ,,
Country Selection No. 1 ..	74	1-5/8 ,,	7 lb. 8½ ,,

The native fowl as commonly kept is a daughter of neglect. As little or no expense is incurred for feed and maintenance either income or loss would be very small. During recent years poultry husbandry conducted along scientific lines has been recommended as an industry subsidiary to farming. The question at once arises as to what a farmer may hope to earn if he incurs expense for feed and maintenance. Our figures below may help to answer this question.

¹ In co-operation with the Imperial Council of Agricultural Research.

² From an unpublished report presented to the Imperial Council of Agricultural Research.

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TABLE V

Value of Eggs over Feed and Maintenance Cost. December 1, 1937 to May 31, 1938. Flock Average

Breed	Total average No. of Eggs per Hen	Average Feed Cost per month per Hen	Total Feed Cost per Hen for the Period	Value of Eggs per Hen	Profits (+) or Loss (-)
Rhode Island Red ..	81	Rs 0 5 11	Rs 2 3 6	Rs 5 14 6	+3 11 0
White Leghorn ..	72	Rs 0 5 2	Rs 1 15 0	Rs 5 3 6	+3 4 6
Country Selection No. 1 ..	45	Rs 0 3 10	Rs 1 7 0	Rs 1 6 6	-0 0 6

Note.—Eggs for R.I.R. and W.L. are counted at As 14 per dozen, as this is what they will bring when sold in city markets. Country selection eggs sell locally at As 6 per dozen.

During the six months period Rhode Island Red fowls produced 81 eggs each as a flock average, having a market value of Rs 5-14-6. The value of eggs over the cost of feed was Rs 3-11-0. The White Leghorn breed ranked second showing a gain of Rs 3-4-6 on the basis of feed costs. Country Selection fowls showed a small loss, due largely to low production and the low price received for the eggs.

FEEDING EXPERIMENT

To investigate more fully the possibility of using improved fowls as a supplementary source of income various feeding experiments have been conducted on the Vocational Training School farm. The results for one of these conducted during the year 1937-8 are given herewith.

Purpose

To test a complete ration, including animal protein v. an all-grain ration. The latter was intended to approximate as nearly as possible to the feed that fowls might ordinarily have if kept under village conditions, except that grain was provided in

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sufficient quantity instead of the usual limited supply of chaff and screenings.

Specific purpose

To test the two systems of feeding as to cost, and general health and maturity of the birds.

Procedure

On February 1 two lots, with 10-day old chicks in each, having a heritage as nearly equal as possible were selected. Each lot was kept in a yard measuring 10 feet by 14 feet. Water, minerals, fresh sand, gravel and medicines as needed were supplied equally to both lots.

Feeding

Lot No. 1 received a cracked grain mixture as follows:—

Wheat ..	..	..	..	1 part
Grain sorghum ..	..	..	..	3 parts
Millet ..	..	..	..	1 part

The following mash mixture was fed:—

Ground Wheat ..	..	..	..	2 parts
Grain sorghum ..	..	..	..	5 parts
Ground Millet ..	..	..	..	1 part
,, Gram ..	..	..	..	$\frac{1}{2}$ part
Rice Bran ..	..	..	..	1 part
Wheat Bran ..	..	..	..	1 part
Dried Fish (powdered)	..	..	..	1 part

Skim milk, either sweet or sour, was fed twice a week mixed with the mash. It was also given for drinking once a week.

Green feed in the form of onions, cabbage leaves and alfalfa was fed daily.

Lot No. 2 received only a grain mixture as follows:—

Wheat ..	..	..	..	1 part
Grain sorghum ..	..	..	..	3 parts
Millet ..	..	..	..	1 part

The grain was cracked and fed morning and evening. At noon a small amount of the same grains ground was fed in the

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form of a mash. A limited amount of green feed was allowed to make up for the grass that the birds would ordinarily glean if on free range.

The birds were weighed once a month and their general condition was observed from time to time. By the end of one month the superior condition and appearance was noticeable in Lot No. 1. This difference became more apparent as the experiment progressed.

Results Tabulated

Lot No.	Average weight on May 31	Average Feed Cost		Feed Cost per pound of Gain	
		from Feb. 1 to May 31	As P.	As P.	As P.
1	2 lb.	7 3		3 8	
" 2	1 lb. 4 oz.	4 6		3 7	

A common complaint is that village men cannot afford a complete ration as is shown above. Our experience would suggest that the complete ration is economical and profitable. According to our results animal protein in the form of milk or fish meal is essential and it more than pays for the expense of using it.

SUMMARY

Possibilities for improvement

There are at least five requirements for permanent improvement of livestock. (1) A changed attitude on the part of farmers themselves, (2) Practice of selective breeding, (3) Better care and feeding, (4) Attention to the control of diseases, and (5) Capital on favourable terms.

1 *Attitude of farmers.*—Concerning the first point Mr Gandhi himself has observed, 'I hardly think that the fate of animals is so sad in any other country as it is in India. We cannot hold the English responsible for this, nor can we excuse ourselves by pleading poverty. Criminal neglect is the only cause of the deplorable condition of our cattle.'¹ 'Once as an example

¹ M. K. Gandhi, quoted by Albert Schweitzer in his *Indian Thought and Its Development*, p. 227.

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Mr Gandhi ended the sufferings of a calf by a mercy killing much to the astonishment of his orthodox Hindu colleagues. While this caused serious offence for the moment it established a precedent from which may date a beginning in the improvement of livestock and the lessening of both human and animal suffering. With a heavy heart he (Mr Gandhi) gives his followers permission to kill snakes and he allows the farmer to defend himself against the monkeys which threaten his crops.¹ Such a change of mind sees the doctrine of *ahinsa* (non-violence) not as mere passive abstaining from direct killing or from control of the processes of breeding. Rather, it becomes the practice of an active compassion which can lead to an increase of both animal and human welfare.

2 Selective breeding.—Due to the vast numbers of inferior livestock, efforts in improvement through breeding should be confined to carefully restricted areas where they can be directed. In this way the results become apparent to the people and necessary checks and records can be made as required. To release sires promiscuously is only to waste their influence on worthless stock and the results of cross breeding are dissipated.

Any effort must be sufficiently wide in scope and planned for a long enough period of time to make its results permanent. Individuals willing to work in this field should combine their efforts with other agencies so as to give continuity. Scattered and sporadic efforts will be lost.

3 Feeding and care.—In practice working oxen and milking buffaloes are given preference in feeding. Any grain that may be available is reserved for them. Dry cows and young stock have to subsist on any pasture and coarse fodder that they can find. Shortage of feed is the common complaint among farmers. Any programme of improvement must give attention to the feed supply. This is another reason for a long-term breeding effort which is restricted in its area.

Poor feeding is largely responsible for slow maturity in cattle. Oxen are seldom able to work until they are five or six

¹ *Ibid.*, p. 227.

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years old. Farmers' statements indicate that cows remain dry about two-thirds of the time, and many are barren.

Given livestock capable of yielding a return for the feed given it will pay farmers to divert some of the land now used for cotton and food grain to the production of feed, with special reference to crops like forage jowar. Here again, perhaps the most effective method for extending the amount of feed available would be to eliminate worthless cattle.

The improvement of fowls can be effected in a comparatively short time. Given pure-bred cocks and assuming that the native cocks have been removed, notable results can be obtained in the first year. By the use of White Leghorn cocks with native hens the first generation of pullets is white. There is a marked increase both in the size and number of eggs produced. First generation pullets which produce 160 or more $1\frac{3}{4}$ ounce eggs are common. By the use of Rhode Island Red cocks with native hens the first two generations are of mixed colour but there is a remarkable increase in the egg production, provided satisfactory breeding stock is used and suitable feed and care are given.¹

Large numbers of inferior livestock are a drain that farmers can ill afford to bear. To reverse the process of deterioration is a gigantic task, but any notable increase in crop yields and in the food supply of the people can hardly be obtained in any other way.

4 Control of pests and diseases.—The Government of India has a programme for the control of major epidemics among livestock. In some cases vaccines for inoculation are available almost free from the local veterinarian whose services are also practically free to cultivators. Illiterate and conservative, the people are slow to avail themselves of such help. Epidemics are often reported late and consequently the service is not as helpful as it would be if people were educated to a point of closer co-operation.

Losses to poultry, caused by diseases and ticks are heavy, but the people persist in raising a few birds each year. Probably

¹ Information from tests conducted by the Vocational Training School under the direction of the Imperial Council of Agricultural Research, 1936-8.

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the most effective method for developing interest in the control of disease and parasites is first to create interest in keeping improved livestock, something in which they can take pride.

5 *Capital*.—Present high rates of interest and unfavourable terms of credit discourage farmers even though they may wish to purchase better oxen or make a start with improved cattle. A certain amount of working capital is necessary, but if it is available only at prohibitive rates of interest the farmer's project is partly defeated before he begins.

CHAPTER FOUR

THE FARM INCOME

MODERN circumstances require that even the backward-class farmer be more or less of a business man. However small his transactions may be, they are important to him. We present him here as a producer, buyer and seller, with a statement of the amount that he has left for his year's labour. Material for this chapter was prepared with the help of 192 men as they produced, bought and sold. Familiar with hunger, insecurity and mounting indebtedness the low income farmer speaks willingly of 'the amount that remains'.

Before the development of travel and the wide use of money the farmer was largely self-supporting. He lived in an economy of poverty where he produced a little extra food that he could use in barter. In such an economy it would not have been appropriate to measure the farm income in money. But the barter economy has so nearly disappeared that money now becomes a suitable standard for measuring.

We show both the farm income and the labour income. Due to unsettled conditions with regard to indebtedness and wide variation in the rates of interest, we consider farm income the more dependable measure. For determining the amount of interest to charge for investment in livestock and equipment we used the rate prevailing on each farm. In the case of land, a common rate of 10% was charged. It is evident that the farm enterprise cannot yield such a high return for investment in land, but men who place their land under mortgage rarely pay less than that rate.

In order to arrive at a more accurate income figure the men were divided into three groups—Farm-owners, Part-owners and Tenants.

THE FARM INCOME

FARM-OWNERS

In this group were 41 men who owned all the land they farmed. The summary of receipts, operating expenses and income for these farms is shown in Table VI.

TABLE VI

*Summary of Receipts, Operating Expenses and Income for
41 Owner-operated Farms*

		Average 10 high income farms	Average 10 low income farms	Average all farms in group
Area of farm in acres	..	20.4	7.8	13.5
		Rs As P.	Rs As P.	Rs As P.
Cash receipts	..	429 10 0	112 9 0	241 5 0
Operating expenses	..	211 8 0	72 12 0	120 15 0
Inventory change	..	+41 5 0	-0 12 0	+8 10 0
Farm income	..	259 7 0	39 1 0	129 0 0
Interest on investment	..	246 3 0	85 8 0	140 13 0
Labour income	..	13 4 0	-46 7 0	-11 13 0
Value of food grain stored for home use	..	75 0 0	33 4 0	42 4 0 ¹

In the table are shown three columns, the ten farms having the highest income, the ten farms having the lowest income and the average income for all farms in the group.

The ten highest income farms averaged 20.4 acres of land each. The lowest income farms averaged 7.8 acres. The average cash receipts from all sources amounted to Rs429-10-0 on the high farms, Rs112-9-0 on the low farms and an average of Rs241-5-0 for all.

¹ At threshing time the farmer as far as possible aims to set aside a supply of food grain for family use during the year. The value of such grain was estimated in each case and the amounts are shown as above, as an addition to the cash income. These same amounts will appear again in a later chapter where we estimate the value of fuel and other articles which the farm contributes to the family living.

THE FARMER SPEAKS

Sources of income

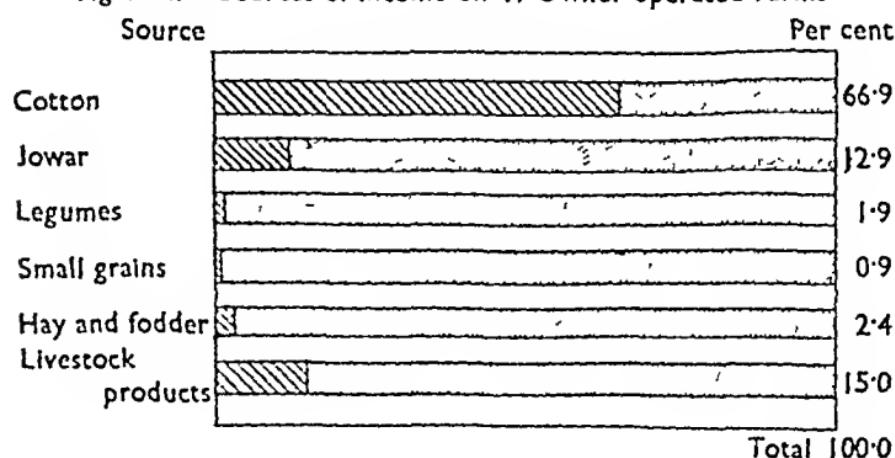
In a study of peasant farming the source of income is important. Cotton provided 67% of the cash receipts on all farms. The ten highest income farms received but 65% of their receipts from cotton while the ten low income farms depended on cotton for 75%. Livestock provided 19% of the receipts on the ten highest income farms. The ten farms having the lowest income received only 8% from livestock. The figures for the tables and several graphs which follow are for actual cash receipts. If the amounts of jowar, pulses and livestock products used at home were included, the figures for these items would of course be higher than those shown. Provision for this is made by counting the value of food grains stored for home use.

Figure III shows the sources of cash receipts for all owner-operated farms. Cotton furnishes 66.9%, jowar 12.9% and livestock 15%.

Operating expenses

Under operating costs are included all expenses incurred in operating the farm, such as taxes, feed bought, hired labour, seeds, repairs, farm equipment, etc. Labour represented 22% of all expense on the low income farms and 19% on the high income

Figure III Sources of Income on 41 Owner-operated Farms



THE FARM INCOME
TABLE VII

Receipts and Operating Expenses for 41 Owner-operated Farms showing Farms of Highest, Lowest and Average Income

	The highest income farm				The lowest income farm				Average for all farms in group			
Area of farm in acres	32.5				7.8				13.5			
Receipts:	Rs	As	P.	%	Rs	As	P.	%	Rs	As	P.	%
Cotton	..	305	4	0	55.5	87	8	0	67.9	161	5	0
Jowar	..	64	0	0	11.6	24	10	0	18.7	31	0	0
Legumes	..	13	8	0	2.4	5	0	0	3.8	4	3	0
Small grains	..	13	0	0	2.2	....	..	..	2	6	0	.9
Hay and fodder	..	....	..	..	6	0	0	4.8	6	10	0	2.4
Livestock products	156	0	0	28.3	6	4	0	4.8	35	13	0	15.0
TOTAL ..	551	12	0	100.0	129	6	0	100.0	241	5	0	100.0

Operating Expenses:

Taxes and toll	..	55	2	0	19.4	29	6	0	24.7	35	0	0	28.5
Labour	..	60	8	0	20.5	12	6	0	10.2	13	2	0	11.1
Seeds, etc.	..	11	0	0	3.6	28	0	0	23.9	14	6	0	11.8
Feeds and miscellaneous	..	48	0	0	16.7	32	0	0	27.5	24	0	0	20.0
Farm equipment	29	0	0	10.3	2	0	0	1.8	22	15	0	19.1	
Livestock purchased	..	85	0	0	29.5	13	12	0	11.9	11	8	0	9.5
TOTAL ..	288	10	0	100.0	117	8	0	100.0	120	15	0	100.0	

Inventory change	+	114	0	0		-25	0	0		+	8	10	0
Farm income	..	377	2	0		-13	2	0		129	0	0	
Interest charged		319	0	0		96	8	0		140	13	0	
Labour income		58	2	0		-109	10	0		-11	13	0	

Food and grain stored for home use	..	71	0	0		25	0	0		42	4	0	
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THE FARMER SPEAKS
TABLE VIII

Details of Receipts and Operating Expenses for 41 Owner-operated Farms

	Average 10 high income farms				Average 10 low income farms				Average for all farms in group			
<i>Sources of Income:</i>	Rs As P. %				Rs As P. %				Rs As P. %			
Cotton	..	281	0	0	65.5	85	0	0	75.8	161	5	0
Jowar	..	48	0	0	11.1	13	0	0	11.6	31	0	0
Legumes	..	8	0	0	1.9	0	8	0	5	4	3	0
Small grains	..	9	12	0	2.0	5	0	0	4.0	2	6	0
Hay fodder	..	....	..	..	..	....	..	..	..	6	10	0
Livestock products	..	82	14	0	19.5	9	0	0	8.1	35	13	0
TOTAL	..	429	10	0	100.0	112	8	0	100.0	241	5	0

Operating Expenses:

Taxes and toll	..	53	0	0	25.1	13	0	0	17.9	35	0	0	28.5
Labour	..	42	6	0	19.9	16	14	0	23.3	13	2	0	11.1
Seeds, etc.	..	17	0	0	8.0	11	0	0	15.1	14	6	0	11.8
Feed and miscellaneous	..	45	0	0	21.5	13	6	0	18.3	24	0	0	20.0
Farm equipment	28	2	0	13.2	14	14	0	20.4	22	15	0	19.1	
Livestock purchased	..	26	0	0	12.3	3	10	0	5.0	11	8	0	9.5
TOTAL	..	211	8	0	100.0	72	12	0	100.0	120	15	0	100.0

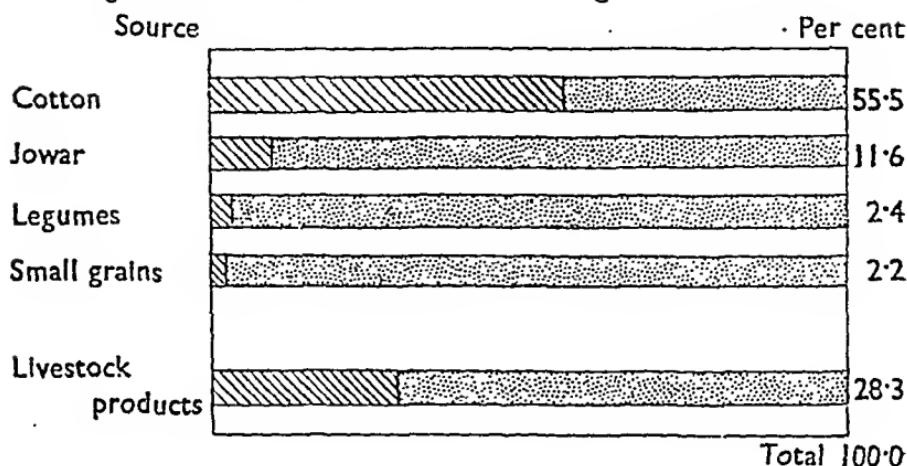
farms. Operating expenses averaged Rs10 per acre for all farms.

Table VII shows cash receipts, expenditures and income for the highest and lowest income farms. The highest income farm consisting of 32.5 acres had receipts of Rs551-12-0, expenditures of Rs288-10-0 and a farm income of Rs377-2-0. On this farm cotton supplied only 55.5% of the total receipts and livestock 28.3%. See Figure IV.

The inventory value of livestock increased by Rs114 during the year and there was practically no indebtedness.

THE FARM INCOME

Figure IV Sources of Income on the Highest Income Farm



Farm income

The average farm income was Rs129. For the ten highest farms the income was Rs259, and for the ten lowest, Rs39.1.0. These amounts are either greatly reduced or converted into deficits if we charge interest at current rates for capital invested.

What the farm furnishes towards the family living

We have made the following calculations on an annual basis, after consultation and the use of such records as were available.

Items	Value		
	Rs As P.		
Fuel	12 0 0
Milk and eggs	10 0 0
Grain and legumes used prior to harvest		8 0 0	
Monsoon vegetables	2 8 0
Tobacco	2 0 0
		<hr/>	<hr/>
		34 8 0	
Value of food grain stored for home consumption	42 4 0
		<hr/>	<hr/>
TOTAL	..	76 12 0	

The families who owned the land they farmed received approximately Rs76.12.0 worth of products in addition to the cash income of Rs129. See Table VI (p. 107).

THE FARMER SPEAKS
PART-OWNERS

The 62 men who owned some land and rented additional tracts had farms averaging 12.8 acres. Their receipts averaged Rs 190-10-0 and operating expenses Rs 97-2-0. There remained an average farm income of Rs 97-4-0. The ten highest income farms had an average of 22 acres of land. Their average farm income was Rs 193-4-0. Here again, cotton furnished two-thirds of the cash receipts. The highest income farm had 24 acres of

Figure V The Different Sources of Farm Income

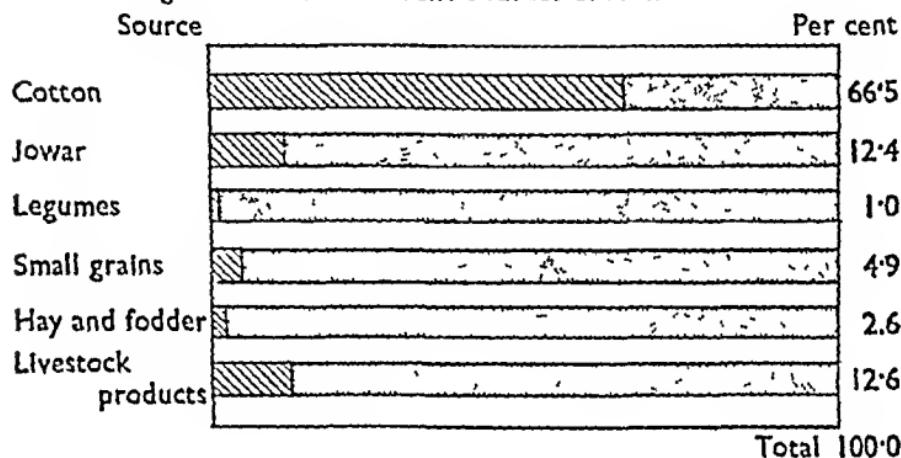


TABLE IX

Summary of Receipts, Operating Expenses and Income for 62 Part-owner Farms

	Area of farm in acres..	Average 10			Average 10			Average for					
		high income farms	low income farms	in all farms	high income farms	low income farms	in group	Rs	As	P.	Rs	As	P.
Area of farm in acres..	..	22.0	9.6	12.8									
Cash receipts	..	375 8 0	69 2 0	190 10 0									
Operating expenses	..	183 2 0	44 8 0	97 2 0									
Inventory change	..	40 14 0	-4 10 0	+3 12 0									
Farm income	..	193 4 0	20 0 0	97 4 0									
Interest on investment	..	139 5 0	43 0 0	62 0 0									
Labour income	..	53 15 0	-23 0 0	35 4 0									
Value of food grain stored for home consumption	..	62 0 0	36 0 0	45 0 0									

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land. Of this, 15 acres were owned by the operator and 9 acres were rented. The farm income was Rs238-13-0. The lowest farm in this group, with but six acres of land, had a deficit of Rs 3-8-0.

TABLE X

Receipts and Operating Expenses for Part-owner Farms, showing Farms of Highest, Lowest and Average Income

	The highest income farm				The lowest income farm				Average for all farms in group				
Area of farm in acres	24.0				6.0				12.8				
<i>Receipts:</i>	Rs	As	P.	%	Rs	As	P.	%	Rs	As	P.	%	
Cotton	..	280	0	71.6	29	8	0	42.8	126	2	0	66.5	
Jowar	..	120	0	5.1	28	0	0	40.8	23	2	0	12.4	
Legumes	..	18	6	0	4.6	6	10	0	8.8	1	14	0	1.0
Small grains	..	20	0	0	5.1	5	12	0	7.6	9	2	0	4.9
Hay and fodder	..	....	..	..	....	..	..	..	5	12	0	2.6
Livestock products	53	0	0	13.6	....	..	..	..	24	10	0	12.6
TOTAL	..	491	6	0	100.0	69	14	0	100.0	190	10	0	100.0
<i>Operating Expenses:</i>													
Rent	..	....	..	..	30	0	0	35.4	10	0	0	10.3
Taxes and toll	..	50	12	0	23.9	14	9	0	17.4	16	8	0	17.0
Labour	..	60	0	0	28.8	4	3	0	4.7	21	8	0	22.2
Seeds, etc.	..	8	13	0	4.3	13	8	0	15.6	10	14	0	11.2
Feeds and misc.	..	44	0	0	21.0	21	4	0	24.9	16	6	0	16.9
Farm equipment	14	0	0	6.6	1	14	0	2.0	16	8	0	17.0	
Livestock purchased	..	32	0	0	15.4	....	..	..	5	6	0	5.4
TOTAL	..	209	9	0	100.0	85	6	0	100.0	97	2	0	100.0
<i>Inventory change</i>	..	-43	0	0	+12	0	0	+3	12	0			
Farm income	..	238	13	0	-3	8	0	97	4	0			
Interest charged	..	109	0	0	65	0	0	82	0	0			
Labour income	..	129	13	0	-68	8	0	15	0	0			
<i>Food grain stored for home use</i>	..	62	0	0	30	6	0	48	4	0			

THE FARMER SPEAKS

TABLE XI

Details of Receipts and Operating Expenses for 62 Part-owner Farms

	Average 10 high income farms				Average 10 low income farms				Average for all farms in group				
<i>Sources of Income:</i>	Rs As P. %				Rs As P. %				Rs As P. %				
Cotton	..	274	10	0	73·2	48	10	0	70·5	126	2	0	66·5
Jowar	..	44	8	0	11·9	10	0	0	14·4	23	2	0	12·4
Legumes	..	14	0	0	3·7	1	4	0	1·8	1	14	0	1·0
Small grains	..	6	10	0	1·8	2	4	0	3·0	9	2	0	4·9
Hay and fodder	..	4	10	0	1·1	....			..	5	12	0	2·6
Livestock products	..	31	2	0	8·3	7	0	0	10·3	24	10	0	12·6
TOTAL	..	375	8	0	100·0	69	2	0	100·0	190	10	0	100·0
<i>Operating Expenses:</i>													
Rent	..	36	6	0	19·6	8	8	0	19·3	10	0	0	10·3
Taxes and toll	..	27	12	0	15·5	10	12	0	24·6	16	8	0	17·0
Labour	..	38	0	0	20·7	8	8	0	18·3	21	8	0	22·2
Seeds, etc.	..	8	0	0	4·3	4	10	0	10·7	10	14	0	11·2
Feed and misc.	..	31	5	0	16·9	3	2	0	6·7	16	6	0	16·9
Farm equipment	..	26	11	0	14·8	5	0	0	11·3	16	8	0	17·0
Livestock purchased	..	15	0	0	8·2	4	0	0	9·1	5	6	0	5·4
TOTAL	..	183	2	0	100·0	44	8	0	100·0	97	2	0	100·0

TENANT FARMS

There were eighty-nine tenants, men who depended entirely upon rented land for farming. Tenant farms are characterized by a deficiency both in the amount of land and in the farm income. The average size for all farms in this group was 12 acres. The ten farms having the highest income averaged 23·2 acres and the ten farms having the lowest income averaged 8·3 acres. The highest farm income, Rs 201·9·0, was for a farm of 29 acres. (See Table XIII.) Nearly ten per cent of the cash receipts were from livestock. The least successful farm had only 5·4 acres, and a deficit of Rs 17·3·6. There was no income from livestock.

THE FARM INCOME

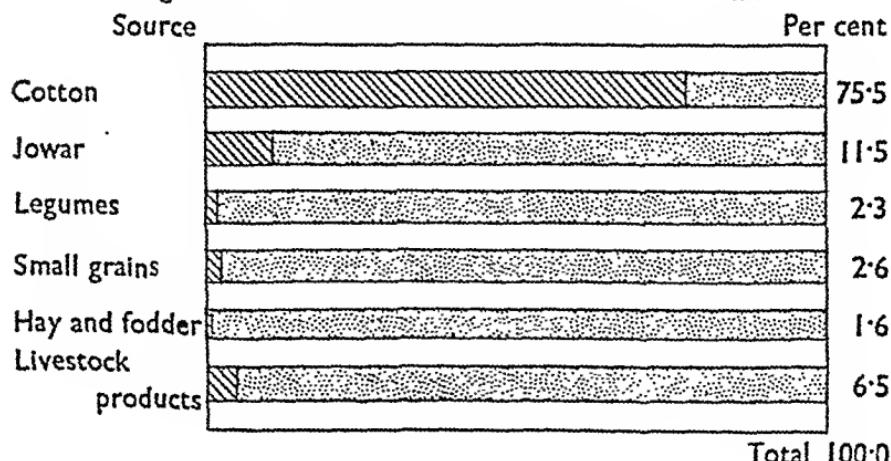
Table XII presents a summary of income and expenditures for the 89 tenant farms. A characteristic of farms in this group is a high dependence upon cotton as a source of income, and a low income from livestock. Cotton contributed 75% of the cash receipts and livestock less than 7%. The average cash receipts per acre were Rs 11 as compared with Rs 18-9-0 for the owner-operated farms. The probable reason for this is that owner-operators as a group had better land and they managed it more efficiently.

TABLE XII

Summary of Receipts, Operating Expenses and Income for 89 Tenant Farms

		Average 10 high income farms	Average 10 low income farms	Average for all farms in group
Area of farm in acres	..	23.2	8.3	12.0
		Rs As P.	Rs As P.	Rs As P.
Cash receipts	..	302 8 0	80 4 0	130 0 0
Operating expenses	..	160 3 0	78 8 0	84 5 0
Inventory change	..	+21 15 0	+1 10 0	-2 10 0
Farm income	..	164 4 0	3 6 0	43 1 0
Interest on investment	..	37 10 0	10 4 0	15 0 0
Labour income	..	126 12 0	-6 14 0	28 1 0
Value of food grain stored for home consumption	..	52 12 0	24 0 0	32 0 0

Figure VI Sources of Income on 89 Tenant Farms



THE FARMER SPEAKS
TABLE XIII

Receipts and Operating Expenses for 89 Tenant Farms, showing Farms of Highest, Lowest and Average Income

	The highest income farm				The lowest income farm				Average for all farms in group			
Area of farm in acres	29.9				5.4				12.0			
<i>Receipts:</i>	Rs	As	P.	%	Rs	As	P.	%	Rs	As	P.	%
Cotton	..	354	6	0	73.7	43	0	0	45.2	97	8	0
Jowar	..	72	14	0	15.3	38	4	0	40.0	15	1	0
Legumes	..	8	0	0	1.6	6	8	0	6.3	3	4	0
Small grains	..	....	..	..	8	0	0	8.5	3	7	0	2.6
Hay and fodder	..	....	..	..	....	..	..	..	2	3	0	1.6
Livestock products	..	45	0	0	9.4	....	..	..	8	9	0	6.5
TOTAL	..	480	4	0	100.0	95	12	0	100.0	130	0	0

Operating Expenses:

Rent	..	....	..	..	35	0	0	43.4	17	4	0	20.8	
Taxes and toll	..	47	9	0	17.5	4	0	0	4.9	6	8	0	7.8
Labour	..	114	0	0	38.0	18	0	0	22.0	17	6	0	20.9
Seeds, etc.	..	5	0	0	2.0	5	12	0	7.3	7	8	0	8.9
Feeds and misc.	..	34	8	0	11.8	16	0	0	20.0	13	6	0	15.4
Farm equipment	..	24	0	0	8.5	2	0	0	2.4	13	8	0	15.6
Livestock purchased	..	65	0	0	22.2	....	..	..	8	13	0	10.6	
TOTAL	..	290	1	0	100.0	80	12	0	100.0	84	5	0	100.0

Inventory change	..	+12	0	0	-32	0	0	-2	10	0		
Farm income	..	201	9	0	-17	3	6	43	1	0		
Interest charged	..	39	0	0	12	0	0	15	0	0		
Labour income	..	162	9	0	-29	3	0	28	1	0		

Food grain stored for

home use	..	52	0	0	18	0	0	32	0	0		

THE FARM INCOME

TABLE XIV

Details of Receipts and Operating Expenses for 89 Tenant Farms

	Average 10 high income farms				Average 10 low income farms				Average all farms in group				
<i>Sources of Income:</i>	Rs	As	P.	%	Rs	As	P.	%	Rs	As	P.	%	
Cotton	..	221	6	0	73.4	65	2	0	80.7	97	8	0	75.5
Jowar	..	45	4	0	14.9	1	10	0	2.4	15	1	0	11.5
Legumes	..	11	2	0	3.6	4	4	0	6.0	3	4	0	2.3
Small grains	..	3	10	0	1.2	5	11	0	6.4	3	7	0	2.6
Hay and fodder		8	0	0	2.6	....		..		2	3	0	1.6
Livestock products	..	13	2	0	4.3	3	9	0	4.5	8	9	0	6.5
TOTAL	..	302	8	0	100.0	80	4	0	100.0	130	0	0	100.0

Operating Expenses:

Rent	..	34	4	0	21.9	9	0	0	11.8	17	4	0	20.8
Taxes and toll	..	22	5	0	13.9	5	10	0	7.2	6	8	0	7.8
Labour	..	30	8	0	18.8	16	4	0	20.9	17	6	0	20.9
Seeds, etc.	..	8	15	0	5.6	9	4	0	11.9	7	8	0	8.9
Feed and misc.	..	20	2	0	12.6	15	8	0	19.3	13	6	0	15.4
Farm equipment..	..	25	5	0	15.8	8	4	0	10.6	13	8	0	15.6
Livestock purchased	..	18	12	0	11.4	14	10	0	18.3	8	13	0	10.6
TOTAL	..	160	3	0	100.0	78	8	0	100.0	84	5	0	100.0

Operating expenses for tenant farms per acre were Rs7 as compared with Rs9.4.0 for owner-operated farms.

What the tenant farm contributes toward the family living

On low income farms the amount of produce which the farm contributes toward the family's living is of special importance. This is often the only factor which makes life possible at all. The following is our estimate based on personal inquiry and the records available.

THE FARMER SPEAKS

Items	Value
	Rs As P.
Fuel	12 0 0
Milk and eggs	5 8 0
Grain and legumes used prior to harvest	6 0 0
Monsoon vegetables	3 0 0
Tobacco and chillies	2 8 0
	<hr/>
	29 0 0
Value of grain stored for home consumption ..	32 0 0
	<hr/>
TOTAL ..	61 0 0
	<hr/>

The average size of family for the tenant farms was six, including two adults and four children.

Variation in the amount of farm income

There is wide variation in the amount of income for different farms. With methods of cultivation and management more or less standardized the income for farms of a given area varies largely with the type of soil and amount of land. There are, however, notable differences in crop yields even on similar land.

Income for all groups varies with the size of the farm. One-fifth of all owner-operated farms enjoyed an income of Rs200 or more. See Table XV. One-third had incomes ranging from Rs100 to Rs200. A little less than a third had incomes under Rs100. Only one farm showed a deficit. Given a farm of 20 acres or more, the owner can be reasonably sure of an income of at least Rs200 during normal years.

Turning to tenant farms the situation is less satisfactory. Only two per cent had incomes of Rs200 or more. See Table XVI. About one-third had incomes ranging from Rs25 to Rs79. Fifteen per cent show a deficit.

The economic condition of the average tenant farmer is little better than that of a day labourer. The labourer gets approximately 136 days of work a year. His wife gets about 80 days. Calculating the man's wage at As4 a day and his wife's at As3 would give an annual family income of Rs49.

THE FARM INCOME
TABLE XV

Variation in Amount of Farm Income on 41 Owner-operated Farms

<i>Farm Income</i>		<i>Area of farm in acres</i>	<i>No. of farms</i>	<i>Percentage of all farms in group</i>
Rupees				
200 and more	..	22.3	9	21.9
150 to 199	..	13.2	7	17.1
100 to 149	..	12.5	7	17.1
80 to 99	..	10.7	4	9.8
50 to 79	..	9.7	7	17.0
25 to 49	..	10.3	4	9.8
15 to 24	..	6.7	2	4.9
<i>Deficit</i>				
Rupees				
Less than 10	..	0	0	0
11 to 25	..	0	0	0
26 to 50	..	9.0	1	2.4

TABLE XVI

Variation in Amount of Farm Income on 89 Tenant Farms

<i>Farm Income</i>		<i>Area of farm in acres</i>	<i>No. of farms</i>	<i>Percentage of all farms in group</i>
Rupees				
200 and more	..	27.5	2	2.2
150 to 199	..	24.75	7	7.9
100 to 149	..	15.37	7	7.9
80 to 99	..	13.25	5	5.6
50 to 79	..	12.5	16	18.0
25 to 49	..	9.0	16	18.0
15 to 24	..	8.75	11	12.3
15 and less	..	9.25	11	12.3
<i>Deficit</i>				
Rupees				
Less than 10	..	6.75	3	3.3
11 to 25	..	9.75	6	6.7
25 to 50	..	6.0	5	5.8

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The children can often earn one meal a day and a few rupees per year by carrying water and herding cattle. This added to the income of husband and wife brings it up to the income of farm tenants. Tenants have often said 'the labourers get more than we do'. Probably it is the hope of getting a little extra food and the prestige of being an independent farmer which induces men to undergo the risks of tenant farming.

Small land area, low production per acre and per man are characteristics of the farms studied. In general, a farm of fifteen acres even will produce a fair living for a family provided they own the land and are free from indebtedness. Seventeen per cent of the tenant farms were of this type. There is at present no hope of any general increase in the size of farms. The tendency is towards smaller and smaller farms. Relief must come largely from increasing the quantity and the quality of products produced on the land now available.

How much cotton?

From the data available it would seem that too much dependence on cotton is undesirable as it keeps down livestock production. Tenant farmers in our group relied on cotton for 75% of their cash receipts and livestock for only 6.5%. With cotton prices at the present low level, more grain and fodder grown and fed to livestock would result in a safer and more profitable type of farming. It would seem that not over 50% of the cash income should be derived from cotton. At least 25% should come from livestock.

There would be a two-fold advantage in producing less cotton and more good livestock. With cotton there is an excessive demand for labour at the time of weeding, and again during the time of picking. During these two short seasons farmers vie against each other to get labourers and incur much expense in order to get their work done on time. Livestock would provide more even employment throughout the year, with a saving on hired labour.

Soil improvement would also result. With cotton, both the lint and seed are sold while the stalks and roots are burned for

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fuel. No part of the crop is returned to the land. In general the farmers who depended on livestock for a larger percentage of their cash income had the most satisfactory crop yields. Among owner operators the highest income farm received 28% of cash receipts from livestock and only 55% from cotton. Yields on this farm were 10.3 maunds for cotton and 24 maunds for jowar as compared with the all farm average of 7.4 maunds for cotton and 15.4 maunds for jowar. There would be other factors besides livestock in determining crop yields, but the feeding of a larger part of the crops on the farm and returning manure to the soil is important.

To find a more suitable balance between cotton, cereal grains, legumes and livestock would place farming more on a subsistence basis than a special crop basis as at present. A given area of land with crops properly diversified and cultivated more intensively would produce crops of greater value. This would be more secure economically. Peasants already too near the edge financially would not be dependent upon the success or failure of one crop.

The best farm

As the best or most efficient farm we selected one of 12½ acres. The operator owns 7½ acres and rents 5 for a half share. The yield of cotton on this farm was 12½ maunds per acre, and the yield of jowar was 26 maunds. Cash receipts for his share of the crops and products sold were Rs 394-10-0. Of this amount Rs 82 or 20% was from livestock.

A yoke of oxen worth Rs 136 did the farm work. A buffalo worth Rs 60 and two cows worth Rs 50 supplied the family with milk and provided a surplus of Rs 82 worth of milk for sale.

Equipment which included a cart was valued at Rs 128 and was sufficient for doing satisfactory work. There was no permanent indebtedness.

The farm income amounted to Rs 223 and the labour income Rs 86.

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Of the 192 men interviewed 168 were in debt for amounts ranging from Rs 10 to Rs 1,400. The average indebtedness per farm was Rs 177. The average amount for owners was Rs 423 and for tenants Rs 69. See Table XVII.

Lack of credit is probably the chief reason why the debt load of tenants is less than that of farm owners.

THE FARMER'S NEED FOR CREDIT

The peasant farmer like any business man has legitimate needs for credit. For the purchase of land, for redeeming mortgages or for permanent improvements he may need credit for a long period of time. For the purchase of livestock or equipment he may need financial help for an intermediate period of a few years. Those who have to operate on a narrow margin often need short term credit for weeding crops, cutting hay or the purchase of seed or manure.

From a business standpoint the farmer's credit needs are of three types. He may need long term loans which are repayable in small amounts yearly over a period of from five to twenty years. He may need an intermediate loan which is to be liquidated during a period of two to five years. Or, he may need a short term or seasonal loan which is payable in full at harvest time. The problem is to meet these needs with a minimum of cost and inconvenience to the farmer and the maximum of safety to the lender.

More specifically, the farmers of this class often have little or nothing left after meeting their obligations at the harvest season. Their meagre supply of food grain may have to be used to satisfy some creditor. Consequently there are many who borrow small amounts of money or grain from week to week just in order to live.

REASONS FOR INCURRING DEBTS

In an economy of indebtedness it is often difficult to state the exact reasons for which money was borrowed. A small initial sum may be taken and this followed by subsequent borrowings from time to time until insolvency is reached. In the older debts, accrued interest is the major factor. But in every instance

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there would have to be an initial or chief reason for borrowing and we asked each farmer to state this as nearly as possible. The replies received are given below.

<i>Reasons for Borrowing</i>	<i>No. of replies</i>	<i>Percentage</i>
Wedding expenses	.. 54	33.4
Family living expenses	.. 42	24.7
Operating expenses	.. 23	14.1
Purchase of livestock	.. 14	9.5
Funeral expenses..	.. 13	7.9
To pay for land ..	.. 6	3.7
For building a house	.. 6	3.7
Education of children	.. 5	3.0
 TOTAL ..	 163	 100.0

One hundred and sixty-three farmers were able to speak definitely. Wedding expenses account for indebtedness in 33% of the cases. This is somewhat less than we would have expected and it may be underrated. Nearly 25% had borrowed for family living expenses. Funeral expenses accounted for another 8%. Two-thirds of the borrowing seems to be for social and other expenses quite apart from the farm business. Only 4% had borrowed money to pay for land and slightly under 10% to pay for livestock. 14% reported borrowing for farm operating expenses, including the payment of land revenue.

FARMERS' OPINIONS

Apart from the reasons given we made an effort to determine some of the causes of mounting indebtedness since 1930. The following opinions expressed by the more thoughtful cultivators are of value.

1 *Low prices for farm produce*

'There is not enough left to pay expenses. We have to borrow in order to live and pay land revenue.'

Farmers who have shifted towards cotton production are especially hard pinched by the gradual fall in prices. With no change in the rate of land revenue and perhaps a slight rise in

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and low income are usually considered the causes of indebtedness, prosperity which increases the farmer's credit may also tempt him to borrow beyond his means. This is especially true in the event of wedding and other non-productive social expenditures.

Agriculture and the rate of interest.—Another cause of indebtedness is found in the backward condition of agriculture and the high rate of interest charged for capital. The two form a vicious circle. As commonly carried on, farming is precarious and relatively unprofitable. It is difficult to get the necessary money for improvement from within the industry itself. With rates of interest as they are any effort toward improvement through borrowing only results in further indebtedness.

THE FARMERS' SOURCES OF CREDIT

Of the farmers who borrowed, 90% depended on the indigenous banker or moneylender. Eight were members of co-operative credit societies and several were able to borrow from relatives.

It is common sport to flay the moneylender. Farmers malign him as a usurer waiting for his pound of flesh but they forget that it is through his help that the major part of the agricultural industry is financed. 'He grinds us into dust', they say and forget that it is his frugality and thrift which also saves them during periods of famine, illness or frost. In several villages we found his capital to be little over Rs1,000 but this amount revolving in a small circle is what keeps the agricultural machinery going and makes life possible for many. If crops succeed he receives his interest at due rates from the threshing-floor. When they fail, both he and his clients must tighten their belts. His bad debts are colossal and at times he protects himself in the only way open to him—foreclosure.

We meet various types of lenders. Some are cultivators themselves who lend money as a side line. They are often men of integrity and civic pride and their methods are hardly subject to question. Their rates of interest range from 9% to 12%. Another type of lender may be compared to the private banker. He will not take undue risks and his methods are businesslike.

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Consequently his rates of interest are moderate. He is not a land shark and to him foreclosure is distasteful.

Then there is the rather large group of moneylenders. Each village usually has one or more. The lender is often landlord, storekeeper and grain merchant all in one. His clients are submerged in poverty and are bad risks. His policy is to 'take a loss here and make a killing there'. His clients are forced by circumstances to trade at his store and extortion may be practised. Farmers in general complain both of his rates of interest and terms of business.

THE RATE OF INTEREST

The rate of interest is not merely an arbitrary term fixed by the lender. It is determined by several factors. The first is security. What assurance is there that the money will be paid back? Land and jewellery are preferred by lenders as security. Loans secured in this way can often be had for 12%. When those who have no security and practically no assets ask for loans the lender will not incur the risk for less than 25% to 75%. Lenders report frequent losses for such loans but they recoup their losses from those who pay out.

The lender often enjoys a monopoly relationship with his clients, attained through traditional social rights. Few would question his authority lest he demand immediate settlement or refuse future loans. In most of the villages either the vania or members of his family had been loaning money as long as anyone could remember. Such a relationship is not conducive to moderate interest rates.

The reputation and thrift of the borrower are also factors which help to determine the rate of interest. We found an industrious young Patidar who had got a loan of Rs 800 for 6%. The same lender, however, was charging as much as 25% to his less provident neighbours. One lender in a moment of despair said, 'They all want to lift money but no one thinks of paying back until I press him'. There results a vicious circle. The lender seeing little hope of collecting his principal contents himself with squeezing out such sums as he can get for interest from year to year. The indebted farmer seeing no hope

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of escape devotes much of his time to devising cunning ways to avoid paying. The prayer commonly offered before the goddess of the fields is 'Keep our officers and the moneylender contented and grant us an abundant yield'.

Perhaps the least satisfactory form of lending found is in the advancing of food grain. The farmer may find his food supply exhausted just a month or two before harvest time. In his distress he goes to the merchant who advances grain on condition that $1\frac{1}{4}$ or $1\frac{1}{2}$ times the amount be returned at harvest time. If only a month remains the rate is usually $1\frac{1}{4}$ times, but if two or more months remain until harvest the rate is often $1\frac{1}{2}$ times the amount received.

The chief problem of rural indebtedness seems to lie not so much in the amount but in the fact that capital is available only at rates of interest which make its use precarious.

In addition to high rates of interest the methods used by the lender help to build up a state of permanent indebtedness. His loans are often made for non-business purposes, such as extravagant weddings, payment of caste and religious dues, household expenses and litigation, and in more recent years for travel, liquor and gambling. The borrower is often tempted to take more money than he can hope to pay back, leaving the way open for a profitable foreclosure. A case taken from one of the farms illustrates what can take place when vicious methods of credit are too freely resorted to.

A farmer during the years 1917 to 1928 was able to purchase fifteen acres of land. In addition to simple farming implements he had:

			Rs
1 cart	..	..	150
1 yoke of oxen	..	..	225
2 cows	..	..	80
Young stock	..	..	125
			<hr/>
		TOTAL	580
			<hr/>

He owed Rs 250 on his land. Then followed the frost of 1929 and several years of partial crop failure. He was unable

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to pay the interest on the Rs 250 at 16%, and also 'borrowed a little more to use in paying land revenue'. Additional sums were borrowed for field labour, seed and 'some' for family living expense. In 1936 he was disillusioned when his lender presented a foreclosure order for a debt of Rs 2,250. In settlement the man lost his land, equipment and livestock. Judging from his statements and the frugal manner in which the family lived, we doubt if he could have borrowed more than Rs 300 in addition to the Rs 250 owed in the beginning. This plus a reasonable interest charge could hardly have exceeded Rs 1,200 by 1936. But he had no authentic records and settlement was made on the basis of accounts presented by the lender.

Another weakness of the present system of credit is that no provision is made for repayment of the loan in regular and easy instalments. The above is an illustration of where one reverse leads to another until the farmer is ruined. The lender generally requires that his loan be paid back in a lump sum. As few are able to do this the lender is free to go on exacting his toll of interest indefinitely, which to him is more profitable than repayment of the loan.

Even though social and religious reforms should result in a reduction in wedding and other social expenditures the services of the moneylender will be needed to finance farming for many years to come.

Those who lend money outside their immediate families should be registered and their business practices should conform to a prescribed code. Their accounts should be publicly audited and borrowers also should be required to keep accounts which can be inspected at regular intervals.

CO-OPERATION AND THRIFT

Only eight farmers were members of co-operative credit societies. Yet co-operation promises to be especially useful in helping the small farmer with his credit problems. Records of 4 grade societies show that in the sanctioning of loans they adhere strictly to the business side of farming and frown on loans for social and other non-productive purposes.

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The cultivator may need but a small amount of capital but his need is urgent. It may be only twenty rupees for weeding his crops during the wet season. Failure to secure this promptly may mean loss to him. Unlike the urban merchant who can often pay back a loan after thirty days the farmer will need his small sum for five to ten months. The interest must therefore be low. An ox may die in the midst of the planting season. He must have funds to replace it or his crops may be lost. If he is a cotton farmer he will not be able to pay back the sum in less than eight months. A good co-operative exists for helping its members in just such emergencies.

The co-operative credit movement in India had its beginning with the Famine Commission of 1901. The first Co-operative Societies Act was passed in 1904 after which societies for the purpose of supplying credit were organized. The number increased until today there are in India 68,200 credit societies with a membership of 2,380,000. The general purpose and objectives of the societies are set forth in the Ten Principles of Co-operation printed on the cover of the member's pass book.

1. The object of a co-operative society is to enable members to help themselves. By pooling their savings and taking loans from a central bank they can loan to each other at a reduced rate of interest and on helpful terms. Members are encouraged to save money and keep free from debt.

2. The members should be acquainted with each other and the society should only admit as members those who are known to be honest, sober and reliable.

3. Members are liable both jointly and without limit for funds the society may borrow either from its members or from outside sources. They will therefore be alert to see that loans are made wisely and that borrowers pay their instalments on time.

4. The Managing Committee elected in annual meeting must sanction all loans, see that members pay their instalments properly and that the books are neatly and accurately kept by the Secretary-Treasurer. By recent ruling a member defaulting in his payments to the society is not eligible to membership on the Managing Committee.

5. Money advanced to members must be used for the purpose stated at the time of making application for a loan. Money may be loaned for a period up to five years, according to the use that is to be made of it. For current expenses the period is two years; for the purchase of cattle and equipment, three years; for the payment of old debts or the improvement of land, five years.

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6. Instalments must be paid promptly or a member is liable for penalty.
7. Members will meet annually to elect officers, hear the reports of the Secretary-Treasurer and Auditor, and to transact any other appropriate business. Each member has one vote regardless of the number of shares he may hold.
8. Profits of the society shall be placed in a reserve fund which becomes the joint property of the members. It is the purpose of this fund to protect them in the case of special liabilities.

9. Capital may be obtained from the sale of shares, deposits of members and non-members and by loans from other banks.

10. The society belongs to the members and they alone are responsible for its management. Inspecting officers will advise them but success or failure is in their own hands. Members should study the principles and laws of co-operation so that they may be useful in helping to manage their own society.

From the available capital loans are made to members 'for worthy projects at moderate rates of interest'. Until recently the rate of interest was 9%. This has been reduced to 6% in some strictly rural societies and there is opinion favouring a still further reduction to 4½%.

PURPOSES FOR WHICH LOANS ARE MADE

The records of one well-managed society showed the number of loans made to members during the year and to what purpose the borrowed money was placed. Reference back to the reasons given by farmers as to why they made initial loans suggests the vast difference in purpose and method between the private lender and the co-operative society. Social and living expenses accounted for 68% of the loans made by the private lender, whereas all but 14% of loans made by the co-operative society were made toward operating and improving the farm. In general the co-operative credit society favours productive purposes only.

India's experience with the management of co-operative credit banks has in many instances been none too happy. There are, however, many notable examples which show the possibilities of co-operation. One of these is the Khergaum Christian Co-operative Society. One chief merit of this society is that it has achieved success among Raniparaj people who as a class have been the perpetual victims of the moneylender. The

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successful career of this society is shown in the tables which follow:—

The Khergaum Christian Co-operative Society

		1928	1930	1935	1940
		Rs	Rs	Rs	Rs
Membership	..	14	41	95	105
Capital	..	321	403	1,631	2,291
Reserve Fund	..	..	23	500	1,045
Funds borrowed from outside the Society	..	600	1,636	3,220	1,884

The purposes for which loans are made

Purpose	Number	Amount
		Rs
To pay off old debts	.. 102	20,703
To buy land	.. 52	15,051
Farm operation	.. 34	10,331
To build houses	.. 37	8,706
Household expenses	.. 10	600
For business operations	.. 4	400
For weddings	.. 3	340
TOTAL	.. 242	56,131

The loans made for the payment of old debts were used primarily for the redeeming of mortgaged land. In addition to this, 52 members have been able to purchase 348 acres of land. Thirty-four were given loans for the purchase of livestock, farm equipment and operating expenses. Thirty-seven built houses. While two-thirds of the indebtedness with money-lenders was for unproductive purposes, only 5% of the loans made by this society were of that nature. Nearly two-thirds of all loans made by the Khergaum Christian Co-operative Bank were used for the purchase or the redeeming of land.

SOME CHARACTERISTICS OF CO-OPERATIVE CREDIT

There are several major differences between the methods of a well-managed co-operative bank and those of the average moneylender. The co-operative credit bank uses capital as an

INDEBTEDNESS, CREDIT AND CO-OPERATION

instrument for mutual self-help, the profits of which are prorated among all the members. The moneylender uses his capital purely as a means for accumulating additional profits. At the time of issuing a loan the co-operative bank fixes definite terms for repayment so that the borrower may be freed from his obligation within a given time. A loan from the lender has no such provision and, being based on compound interest, it tends to enslave the borrower permanently.

The co-operative bank takes no undue risks, has much of its work done by honorary workers and its rate of interest is about half that charged by the private lender. The presence of a co-operative bank in a village tends to force the private lenders to modify their interest demands. The success of a co-operative depends both upon the quality of its leadership and the character of the members. The goal of 'each for all and all for each' makes this imperative. The moneylender and his clients are victims of a system of credit which tends to destroy character and thrift. Seeing no hope of becoming free the borrowers slump into an attitude of despair. The lender gains by driving a sharp bargain or foreclosure and his clients hope to gain through cunning devices designed to avoid payment.

There is also a field for co-operation in the marketing of certain commodities. Inquiry into the methods of marketing eggs by the customary method as compared with the methods in use by co-operative sales associations revealed the following results:—

Advantages of selling eggs co-operatively

<i>Customary method of selling</i>	<i>Selling through the Co-operative Association</i>
------------------------------------	---

Village producer
↓
Local buyer
↓
Small town dealer
↓
Urban broker
↓
Retail seller
↓
Producer receives 33%
of the retail price

Village producer
↓
Co-operative Selling Assoc.
↓
Retail purchaser
↓
Producer receives 80%
of the retail price

THE FARMER SPEAKS
SOME DIFFICULTIES IN CO-OPERATION

The co-operatives have their difficulties and limitations. Chief among these are:

1. Insufficient membership. At best only one farmer in ten could have even nominal contact with a co-operative credit society. Due to the lack of collateral only a small percentage of the men in the backward-class group could qualify for membership.
2. There is a lack of desire to co-operate on the part of the people. Uneducated and schooled by custom there are many who still prefer the less restricted methods of the private lender.
3. The societies have had great difficulty during recent years in collecting instalments on time. Auditors report large numbers of societies practically paralysed for this reason.
4. There is a lack of qualified leaders. With the members indifferent and untrained there is a temptation for local and even inspecting officers to lapse into unprofessional methods. In several societies it was customary for the local secretary-treasurer to accumulate the member's pass books prior to the inspector's visit. The officer would stop at the home of the secretary-treasurer and, contrary to ruling, the books were inspected there without the members being present. Legitimate procedure requires that each member come before the inspector in person. In one society a fraud of considerable proportion was later uncovered. The local secretary-treasurer had advanced small loans to illiterate men. Their pass books were kept with him. Later it was discovered that an extra '0' had been placed so as to make the figures in the book show ten times as much as the amount advanced.

With all its difficulties co-operation presents probably the most hopeful road over which peasant farmers may travel toward economic emancipation.

Indebtedness takes a toll in interest from the average farmer in excess of the help he may receive from borrowed money. With interest at 16% the farmer can hardly expect to borrow money without the risk of losing what equity in land or collateral he may possess.

Lack of capital at moderate rates of interest presents one of the chief obstacles to the improvement of peasant farming.

While the moneylender often exacts rates of interest which are excessive, he also assumes risks and helps out in emergencies where a formal banker or co-operative credit society could not function. The entire system of credit and not the lender alone needs to be examined.

Co-operative credit societies, despite some vulnerable points, merit further trial as a means of providing needed capital for farmers at a moderate rate of interest and on helpful terms.

CHAPTER SIX

THE LEVEL OF LIVING¹

WE have considered the income produced on farms and also indebtedness as a factor reducing the amount that would otherwise remain for the family living. We shall now see how far the amount that remains will go toward satisfying the common needs of the people.

While the men spoke willingly concerning such realities as food and clothing, exact information was difficult to obtain. Land records give the area of fields, crop yields can be obtained at harvest time, the income from livestock products can be ascertained with reasonable accuracy, but practically no records of family expenditures are available. Many of the household transactions are conducted through barter and often in an unbusinesslike manner. In numerous instances grain in varying amounts was exchanged for sugar, cloth or spices. In several cases it was customary for men who used liquor during the year to pay for it with grain at harvest time. The liquor merchant kept the accounts and he would send his agents at harvest time to call for the amount of grain due him.

Also, the term 'level of living' is highly variable. Much depends on whose or what level is used, in determining whether a family is living in comfort or want. Whether the level of living is high or low depends on the ideal with which we are comparing. Some would make a trip to town only with the comfort of horse carriage or motor bus. Others would consider themselves fortunate indeed if they had a day of leisure in which they might rest or walk to town.

We realized that anything like a comprehensive statement concerning the level of living would not be within the scope of this study. So we confined our efforts to getting from the people

¹ Level of living figures are for the year 1937-8. Please see paragraph 7 in the Preface.

THE LEVEL OF LIVING

an estimate as to what they consider necessary, in order to sustain life in moderate comfort, and then seeing to what extent their farm income will enable them to attain such a level.

In the absence of research in nutrition, shelter, education costs, etc., an attempt on our part to establish a standard for a given group would seem premature. To us the most appropriate course for the present appeared to lie in getting a planned expression from people as to what they consider essential for satisfying their needs as they see them.

So in mutual consultation we prepared a statement for a family consisting of husband, wife and three children, aged three, nine and twelve years. Food, clothing, education, general items common to all the family, and miscellaneous were considered. The statement for a period of one year follows:—

	Man	Wife	Child 3 yr.	Child 9 yr.	Child 12 yr.	Total
	Rs As P.	Rs As P.	Rs As P.	Rs As P.	Rs As P.	Rs As P.
Food	..	39 0 0	30 0 0	12 0 0	18 0 0	28 0 0
Clothing	..	11 0 0	11 8 0	3 0 0	4 0 0	6 0 0
Education	2 8 0	3 8 0
						6 0 0
						<hr/>
					TOTAL ..	168 8 0

General Items

			Rs As P.
Shelter	..	..	8 0 0
Medicines	..	..	6 0 0
Travel	..	..	3 0 0
Social and religious dues	..	..	8 8 0
Condiments, tobacco, etc.	..	..	5 0 0
			<hr/>
			30 8 0

Miscellaneous

Light	..	..	4 0 0
Household equipment	..	..	14 8 0
Soap	..	..	2 4 0
Other items	..	..	10 0 0
			<hr/>
			30 12 0
			<hr/>
	TOTAL ..	..	229 12 0
			<hr/>

THE FARMER SPEAKS

The estimate for food is intended to provide the simple diet used by those who are regarded as living somewhat above the average in quality and amount of food. In addition to such grains as jowar, rice and restricted amounts of wheat and legumes, there has been included a small allowance for vegetables and milk. The item of shelter is chiefly for repairs of the house which must be made each year prior to the monsoon.

The item of light would amount to but five annas per month and allow for only a small native lamp to be used for a short time in the evening. Under household equipment would be included repairs to cooking utensils and a few sheets or a blanket. Miscellaneous refers to such personal items as a comb, beads, postage for an occasional letter and the barber's services. The barber receives 40 pounds of food grain per year per adult person served. In return for this he renders not only tonsorial services as required during the year, but performs minor surgical operations if required.

The above statement would be considered very conservative. It includes nothing that could be regarded as a luxury or non-essential. The amount allotted to each item is shown below.

TABLE XVIII
Apportionment of Family Income

Items		Amount	Percentage			
			Rs	As	P.	of Total
Food	..	..	127	0	0	55.2
Clothing	..	..	35	8	0	15.4
Education	..	..	6	0	0	2.6
Shelter	..	..	8	0	0	3.5
Medicines	..	..	6	0	0	2.6
Travel	..	..	3	0	0	1.3
Social and religious dues	..	..	8	8	0	3.4
Recreation	..	..	5	0	0	2.8
Light	..	..	4	0	0	1.7
Household equipment	..	..	14	8	0	6.2
Soap	..	..	2	4	0	.9
Other items	..	..	10	0	0	4.4
TOTAL	..	229 12 0				100.0

THE LEVEL OF LIVING

The above figures represent the minimum amount considered necessary in order to meet the bare material and non-material needs of the family. The question now arises as to how much the people actually have to spend or use. Assuming that interest is paid from the farm income as shown in the preceding chapter the amounts left for each group are:

Income Group	Amount of farm income available for family living	Plus grain and other products from farm	Total for family living
	Rs As P.	Rs As P.	Rs As P.
Owner-operators ..	70 0 0	76 12 0	146 12 0
Part owners ..	63 0 0	72 0 0	135 0 0
Tenants ..	30 11 0	61 0 0	91 11 0

The average owner-operator family received a total of Rs 146 in money and products from the farm for their living during the year. This is 63.5% of the amount suggested as a minimum standard. The part owners receiving Rs 135 in money and products had 58% of the amount asked for. The tenants faring still worse received only Rs 91-11-0, 39% of the minimum amount needed.

A POVERTY LEVEL OF LIVING

If the standard set by our group is about the least that would sustain a family in decent comfort the question arises as to how the people survive on amounts so much less. The difference between the amount needed and the amount actually received accounts largely for the unhappy conditions of ill-health, inefficiency and under-nutrition so evident, and alluded to by the Director of Medical Services. Instead of having a few vegetables and a small amount of milk as provided for in the statement, a family is reduced to the very minimum of subsistence on a coarse grain diet. It is customary to save the chaff-like bran of rice which may be ground with the grain for making coarse bread. On several of our visits we saw the women in their pathetic efforts to make enough flour by mixing rice bran with the jowar when grinding. During April, May and June especially, it is not uncommon for many families to have but one meagre

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meal a day. In the local dialect the people refer not to meals but to the number of times they have eaten. That is, whether they get food say once or twice a day. It is our belief that death from starvation is more common than is generally realized.

In practice the item of Rs 6 for education is reduced to only a few annas. Clothing consists of only a coarse garment or two per year. For bedding the average tenant family would be fortunate to have more than a few badly worn sheets, a cotton blanket and perhaps a rope bed. Light, soap and other items must either be dispensed with entirely, or the amount reduced to but a small fraction of what is needed.

CHAPTER SEVEN

HEALTH ON THE LOW INCOME FARM

As the men spoke of health difficulties it seemed to us like the story of a sick people resigned to much illness as the normal course of life. The amount of illness and the losses resulting from it would be hard to measure, especially by a layman. We knew, however, that any information we could secure in regard to the relation of health to the economic condition of the people would be of value. So we discussed several phases of health with each farmer, often with members of the family present. In order to keep the information in a form that could be tabulated we used four questions:

1. What three diseases are most common and troublesome in your family?
2. What do you consider the chief causes of illness to be?
3. What forms of medical aid are used?
4. What is the annual expenditure per family due to illness?

We had to rely on the people concerned to diagnose their own illness. This is commonly done in rural India. Those who seek aid from dispensaries frequently send some member of the family to describe the illness and the doctor prescribes medicine *in absentia*. So considering the local setting it was appropriate to permit the head of a family to name the forms of illness that troubled them most.

Below we list these in the order of frequency.

<i>Form of Illness</i>				<i>No. of times mentioned</i>
'Fever'	182
Skin disease	102
Dysentery	96
Colds	58
Influenza	37

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	<i>Form of Illness</i>		<i>No. of times mentioned</i>
Cholera	35
Sore eyes	18
Worms	11
Small-pox	11
Tuberculosis	8
Boils	7
'Stomach pains'	6
Measles	4
'Headache'	3

It is significant that while some of the major diseases such as cholera and small-pox have begun to yield to preventive efforts, the group of fevers still continues almost unabated. In our inquiry 'fever' heads the list in frequency, being mentioned by 182 out of 192 families as the most common form of illness. Under fever would be classed the various forms of malaria and enteric fever. From long experience the people know the group of tropical fevers well and diagnose them in their various forms as 'common fever', 'cold fever', 'hot fever', 'intermittent fever', 'four-day fever', etc. Malaria is not considered to be a fatal disease. Its vast toll is taken in the form of sapped vitality and physical distress among a large percentage of people. This is all the more significant since it is preventable.

There are various skin infections. Scabies and ringworm are the most common. These too are preventable but the sores are often allowed to spread over the body to such an extent that the victim is partially disabled for a month or more.

Dysentery is largely a monsoon and post-monsoon disease. The germs multiply rapidly during damp, humid weather and they are ingested with water, milk and uncooked fruits or vegetables.

Cholera, once one of the most dreaded of all epidemics, is placed sixth on the list. Small-pox was given ninth place which suggests that, due to the presence of the inoculator and the vaccinator as public servants, these two diseases, once violent in their destruction, are now feared much less than before.

The people themselves do not recognize the presence of hookworm, which accounts for its not appearing in the list.

THE FARMER SPEAKS

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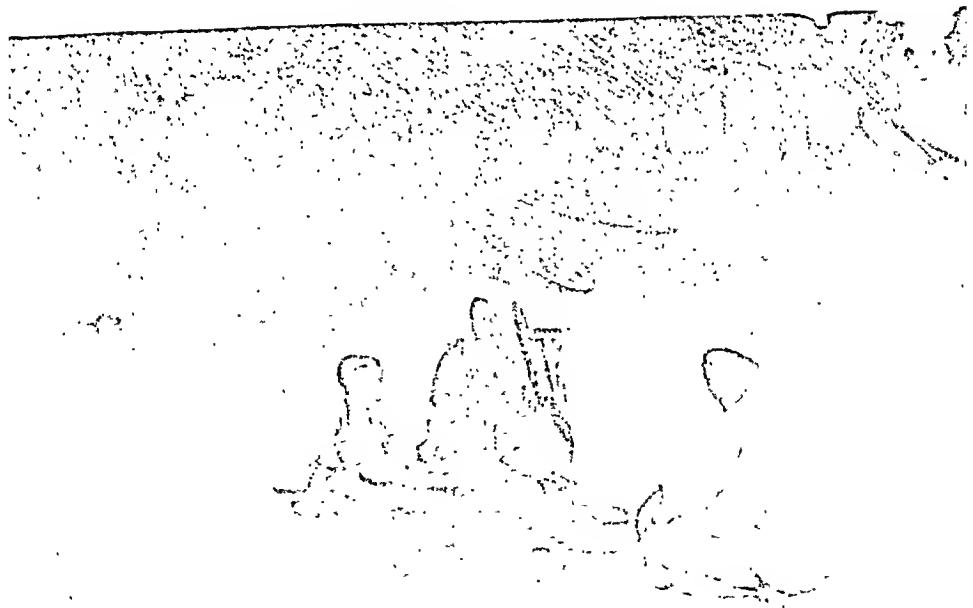
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A temporary house in the field

Grinding jowar for flour



HEALTH ON THE LOW INCOME FARM

More subtle even than malaria it takes its toll in the form of vitality, rendering the victim listless and susceptible to other maladies. The International Health Division of the Rockefeller Institute¹ places the incidence of hookworm at from 60% to 70% for rural India as a whole. Unlike some diseases which occur often by families or wards, they find that hookworm tends to spread rather evenly throughout an entire village. Infection is often uniform over a whole district. If some visible enemy should arise and stalk through the land slaying young and old alike the people would join hands and destroy him. Subtle infections like malaria and hookworm go on taking their toll year after year without opposition.

In each case we asked for the approximate number of days lost annually due to illness among working members of the family. The replies as to what constitutes disabling illness varied so widely that it has not seemed expedient to give space to them here. If the value of energy and time lost due to illness could be calculated in rupees the amount would no doubt be astonishing.

During the month of October we called at eighteen homes in one village for the purpose of checking the prevalence of illness. Out of the eighteen families we found five in which at least one or more adult members were ill. The people considered this a normal occurrence and showed no special concern over it.

The school register also gives us some insight into the prevalence of disease. Teachers are accustomed to absence reaching high proportions, especially during monsoon months and those which immediately follow.

BELIEVED CAUSES OF ILLNESS

The men expressed their views as to the causes of illness. Our purpose here was to learn something of their attitudes as a factor in determining the extent to which they avail themselves of medical aid. The summary of replies received follows; this

¹ International Health Division of the Rockefeller Institute, *Report for 1938*, pp. 64-5.

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represents a cross-section of peasant opinion in regard to the general causes of disease. The believed causes are arranged in the order of frequency.

	<i>Cause</i>		<i>No. of times mentioned</i>
Fate	51
Poor water	34
Weather	32
Bad food	16
Too much work	13
Evil spirits	12
Germs	11
Displeasure of God	9
The Evil Eye	4
Mosquitoes	3
TOTAL			185

The following also were mentioned: Man's evil ways, heat, cold, perspiration, insects and dirt.

The belief that man's destiny is determined by powers beyond his control leads many to accept Fate as the prime cause of disease. It is predestined, so it will be. The efforts of men to prevent it would be futile. To bow to illness and accept it as inevitable is the proper attitude. Yet at the same time those who can afford to do so often seek any form of medical aid or means of escape that may be open to them.

Much concern surrounds drinking water. To orthodox people it may be pure or impure, ceremonially. To the simple peasant the use of 'bad' water from certain wells or ponds is often considered the cause of illness. Strange water is generally regarded with mistrust. This helps to explain the extensive use of tea by those who travel.

Plague is more prevalent during cool winter months, while malaria and dysentery strike hardest during and just following the monsoon. Consequently weather is regarded as a cause of illness and receives third place.

Evil spirits and the displeasure of God were mentioned by twenty-one as causes. The outbreak of an epidemic or the

HEALTH ON THE LOW INCOME FARM

news of its approach is cause for generous offerings of coconuts, sweet oil and butter as a gesture of appeasement.

Certain people, possessing powers of sorcery, can cast an 'evil eye' toward an enemy and cause illness or even death. There were several cases where oxen had died or members of the family had become ill and died, especially male children, due to the influence of some 'spirit' or 'possessed' person.

Germs and mosquitoes were mentioned chiefly by those who had spent some time in schools.

Government and private agencies have done notable work in providing dispensaries where medicine may be had free or at a nominal price. Such facilities are still limited in their ability to serve any large percentage of the people. Isolation and attitude towards scientific medical help prevent some from using such aid as may be available. A common complaint of medical people is that patients come too late.

MEDICAL AID USED

In a third question we asked, 'What medical help do you depend on most?' The replies received were as follows:—

<i>Form of Medical Help</i>		<i>No. of times mentioned</i>
Doctors and dispensaries	..	65
Home remedies	..	45
Village sorcerer	..	15
<i>Valid</i>	..	35
Patent medicines	..	24
The barber	..	7
<hr/>		
	TOTAL ..	<hr/> 191

They were asked to mention only their most important source of help. In practice many who can do so resort to various agencies. Some of those who go to the dispensary will also visit the *bhuva* in order to keep on good terms with him. Among home remedies neem leaves, sweet oil, turmeric powder, pomegranate juice, milk of the cactus plant, sour milk and various spices are used in a variety of ways.

The village *bhuva* gets a generous portion of the money that is spent on medical aid outside the home. The average

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family spends Rs 3-8-0 per year and from their statements a considerable amount goes to him. He sometimes receives his pay in advance and the effectiveness of the cure is believed to depend in part at least on the amount given. He often receives cash but frequently his pay is in the form of a present of native liquor, a chicken, a supply of grain and sometimes a goat. He acts as an intercessor between the patient and spirit or forces causing the illness and if his efforts fail, it is of course the patient who was at fault.

One case as related by one of the men is typical.

My younger brother had hard fever for many days. We brought medicine from the dispensary for him regularly. He received no help from it. Later we decided to entrust him to the *bhuva*. We took him there and the *bhuva* asked that a bottle of liquor be placed near where he and my brother were sitting. We were then asked to wrap a silver coin in a towel and place it by them. He uttered certain incantations which we did not understand. My brother died later but the *bhuva* said he could have cured him if he had come to him first. Now our neighbours blame us for not having done that.

We are inclined to feel that the *vaid* deserves a larger place than was given him in the replies. Less dramatic than the *bhuva*, he dispenses herbs and roots which may be of real value, for but a few pice. He gathers his roots and herbs in secret and his knowledge may be revealed only to his eldest son near the time of his death.

GOVERNMENT CONTROL OF EPIDEMICS

While the fevers and common forms of illness continue unabated, health records indicate that some of the major epidemics, such as plague, cholera and small-pox, are losing their importance. Cholera continues to take an average annual toll of 220,000 lives but there have been no recent epidemics like those of 1902 when 780,000 died, and 1907 when the number of deaths reported was 675,000. Cholera is continually present in various areas but the vigilance of public health officers

HEALTH ON THE LOW INCOME FARM

and the increasing co-operation of the people have prevented it reaching the proportions of a major epidemic in recent years. There were scattered cases of cholera in at least four of the villages we visited. In another instance an outbreak was soon brought under control when the teacher of a Mission school went from house to house every two hours and administered medicines supplied to him by the Government doctor. The presence of cholera no longer causes the fear or mental panic that it formerly did. The water of wells is treated chemically and those exposed are given free serum injections.

For plague the most common method of control is still to evacuate the infested area. People leave their homes and move out into open spaces. Rats are the common carriers of plague. The death of several rats is regarded with suspicion and to the more cautious it is a warning that plague among humans may break out at any time. In the control of plague the most effective work has been done by Government and private agencies through education and the evacuation of infested areas.

For small-pox the Government vaccinator moves from village to village vaccinating the people free. Parents are urged to have babies vaccinated during the first month. Consequently small-pox is steadily decreasing.

BEGINNINGS IN PREVENTION

If Government control of disease is to become effective it will be necessary for the people to co-operate more fully. Such co-operation might take at least five forms.

1 *Construction of more sanitary houses.* Originally it was customary to conceal surplus wealth in the house in the form of jewellery. Houses were therefore built one against the other and with only small windows. Even though the need for such precaution is now less, the old methods of construction still continue. Houses are dark and sunlight rarely enters. With houses damp and dark inside the control of malaria presents great difficulties.

2 *The use of sanitary latrines.* Hookworm, cholera and dysentery will persist as long as lanes and open spaces are used

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instead of latrines. The importance of a proper sanitary system for the control of disease was clearly demonstrated at the fifty-first session of the Indian National Congress at Haripura. Often such a large assembly of people may result in the development of cholera which spreads as the people return to their homes. For this occasion sanitary latrines were provided for all. Drinking water too was closely supervised. Even though several cases of cholera occurred during the Congress it is claimed that there was no noticeable spread of the disease among the 500,000 or more people who attended.

3 *Water supply.* In speaking of the causes of illness farmers referred to 'good' and 'bad' water in a more or less abstract manner. It did not occur to them that the water of their own village might be 'good' or 'bad' and require attention. In few of the villages visited could it be said that the water is satisfactory for drinking. The people of two villages depended partly on the nearby tank for drinking water.

4 *Nutrition.* More adequate food would go far toward the prevention of disease. While not mentioned by anyone as the direct cause of illness the lack of food lowers resistance, making the body an easy prey for infection. The shorter span of life among these people is to a large extent the result of bad nutrition. The table below shows the difference in span of life for a poorly fed peasant group, a group of more prosperous farmers and a merchant class.

TABLE XIX
Age groups of Bhils, Kanbis and Banyas

Groups	0-6 years	7-13 years	14-16 years	17-23 years	24-43 years	44 and over	Total
<i>Bhils</i> (a disad- vantaged peasant group)	.. 223	192	71	117	260	137	1,000
<i>Kanbis</i> (a successful farmer class)	.. 172	166	81	116	285	180	1,000
<i>Banyas</i> (a merchant class)	.. 170	158	70	133	291	178	1,000

NOTE.—These figures are from the 1931 census.

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In comparing the first two groups we find that in the first age group, the Bhils outnumber the Kanbis by 51. However, as we turn to the more advanced age groups the Bhils thin out much more rapidly than do the Kanbis. In the group ranging from 17 to 23 years the numbers are nearly equal. In the groups aged 44 years or more, only 137 of the Bhils are still living while there are 180 Kanbis. Lack of proper food, medical care and shelter are no doubt factors which would help to explain the relatively short span of life enjoyed by Bhils.

Bad nutrition is more common than is generally realized. The teacher in school meets it both as a cause of illness and an obstacle to progress in learning. In one school of backward-class children, the teacher apologized for the irregular attendance and slow progress of his pupils. Inquiry revealed that nearly all were only subsisting on a grain diet. During several months of the year rice bran was ground and mixed with the grain in order to provide some bulk. Fresh fruits were almost unknown and vegetables were scarce. None of the pupils had milk to drink, but one-third had a small amount with tea. Defective eyesight, the symptom of slow starvation, was prevalent.

From a national standpoint the production of a more adequate food supply is perhaps India's most pressing problem. Empty stomachs are still the greatest hindrance to progress and a threat to internal security. For the population as a whole it has been officially estimated that 39% are sufficiently nourished, 41% are poorly nourished and 20% are badly nourished.¹

5 Education for health. There is a general feeling that the illiterate peasant people do not co-operate well in the control of disease. This conservatism is not a characteristic of the Indian peasant alone. When the Jesuit Fathers discovered quinine in 1638, bleeding was considered to be the only cure for fevers. Cures with quinine were marvellous, due in part to the effect of the drug and to the fact that the patient escaped bleeding. It took many years, though, until even the medical profession finally accepted quinine.²

¹ Estimate by Director General of Indian Medical Services.

² Arnold Thurman, *The Folklore of Capitalism*, p. 56.

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The men were apparently conscious of the place and need for scientific medicine but there is a need for more practical education directed towards the development of health habits. People will flee from plague but crowd about a patient suffering from enteric fever or cholera. Entering one village we were at once taken to the bedside of a man suffering from a virulent type of small-pox. Our personal concern was not lessened when they said 'This type takes hold even though one has been vaccinated'. On inquiry we learned that perhaps one-third of the village men had been in to visit the unfortunate man who in the absence of medical care waited for the disease to run its long course.

SUMMARY

Fevers, skin diseases and intestinal infections are considered the most troublesome forms of illness. Even though there has been a wide use of scientific medicine in the prevention and treatment of disease many people regard supernatural powers as the main cause.

The average family spends about Rs 3-8-0 annually on medical help, in addition to home remedies used. A considerable part of this amount goes to the village *bhuva*.

Notable progress has been made in the control of major epidemics but fevers, hookworm and other forms of illness still make a heavy drain on the life and vitality of the people. It is not within our scope to suggest the lines that health reform might take but it seems clear that a larger proportion of any funds appropriated for medical help might well be used in propaganda, education, better housing, and improving the water supply.

CHAPTER EIGHT

FARMERS AND EDUCATION

AMOUNT OF EDUCATION

IF a reasonable amount of formal education is essential to success in farming, the 192 men tell an unfortunate story. They had a total of only 128 school years to their credit, or an average of about seven months of schooling per man. Their statement in this regard follows:—

	<i>No. of years of Schooling</i>	<i>Number of Men</i>
None	..	131
1	..	35
2	..	11
3	..	5
4	..	2
5	..	2
6	..	4
7	..	2
<hr/>		
TOTAL ..		192
<hr/>		

It is assumed that the fourth grade is the minimum essential for effective literacy. By this test only ten of the men could be considered literate. This presents one of the most stubborn problems of village improvement. Illiteracy is generally accompanied by a feeling of timidity and inferiority so that a farmer easily falls a prey to the moneylender or to the buyer of his crops. Unable to read and too reticent to speak for himself or ask questions, he often presses his thumb print on any paper placed before him and in the sale of crops he feels constrained to accept whatever price is offered.

In such cases the spread of useful information is hindered. The farmer, seeing too late that he has been cheated in some way, becomes stolid and suspicious of almost everything. He

THE FARMER SPEAKS

becomes resistant to change even though it would be to his advantage.

Among the women the situation is still less favourable. The 188 women reported for had 35 years of schooling to their credit, which amounts to two months or a fifth standard for each. The situation is shown below.

	<i>No. of years of Formal Education</i>		<i>No. of Women</i>
None	165
1	16
2	4
3	2
4	0
5	1
<hr/>			<hr/>
TOTAL ..			188
<hr/>			<hr/>

There were only twenty-three women who had any schooling at all. One hundred and sixty-five, or 87% had never been to school. Sixteen had spent one year. Only one could qualify as being literate according to the census test.

LITERACY AND INTELLIGENCE

A common error is to attach undue significance to bare literacy as a measure of intelligence. One writer has referred to the illiterate man as being 'absolutely ignorant'. While illiteracy is a handicap, it is by no means a measure of intelligence, or the lack of it. Illiterate men often show intelligence out of all proportion to the amount of formal education they have received. They depend more upon oral learning and memory than the literate man. Many possess a rich fund of useful knowledge, even though they can neither read nor write. They can produce crops and livestock, often under adverse conditions. They may be skilled in certain arts and handicrafts. In co-operation, hospitality and behaviour they may be superior to some who have received a liberal amount of formal education. But with farming becoming more and more a business enterprise a reasonable amount of education is essential.

FARMERS AND EDUCATION

HOW MUCH EDUCATION?

Each farmer expressed his opinion as to the amount of education he considered necessary for boys and for girls. Their replies reveal the innate desire of parents that their children shall have some of the advantages that they themselves missed. The amount of education they think their boys ought to have are shown.

	<i>Amount necessary</i>		<i>No. of replies</i>
1st Grade	0
2nd ,,	15
3rd ,,	38
4th ,,	65
5th ,,	33
6th ,,	29
7th ,,	10
High School Graduate or training			2
<hr/>			<hr/>
TOTAL	..	192	<hr/>

This would provide an average of approximately four standards. Fathers would no doubt have designated a still greater amount as being desirable for their sons but they were probably deterred by the apparent impossibility of getting even this much. Everyone thought that a certain amount of education is necessary. Fifteen would be satisfied with the second grade while thirty-eight wanted the third grade. Two-thirds wanted their boys to have fourth grade education or more. Of these two ambitious souls aspired to high school graduation or teacher training as the goal for their sons.

The amount of schooling considered necessary for girls is shown also. The replies suggest the equivalent of second grade as being sufficient. This is about half the amount required for boys. Naturally enough, thirty-six did not think girls needed any education at all. Forty-two wanted the first grade for their daughters and sixty wanted the third grade. Completing the third grade by about the age of ten, a girl is ready for several years of work at home before marriage.

THE FARMER SPEAKS

	<i>Amount necessary</i>		<i>Number of replies</i>
None	36
1st Grade	42
2nd „	15
3rd „	60
4th „	16
5th „	10
6th „	9
7th „	4
TOTAL ..		192	

Tradition still suggests that education is unnecessary for woman's work which is in the home and field. Several farmers believed that a girl having spent more than a few years in school might not accommodate herself readily to the common toil of daily life. Such a girl might not even be welcome in a home where the mother-in-law is illiterate. Such views in contrast to the general opinion that an educated boy is clearly an economic asset, have greatly hindered the progress of education among girls and women.

There is a growing interest in education for both girls and boys. In a few of the villages the Bhils, for many years a backward people, are employing teachers at their own expense if a Mission or Government school is not available. So the same questions asked a few years later would no doubt reveal that parents considered a still greater amount of education necessary.

Turning now to the amount spent on education we see one of the many frustrations these unfortunate people experience. Whatever amount of education they consider desirable for their children they are confronted by the fact that for them education is a luxury that they can rarely afford under their present circumstances. Bread and a few clothes represent more immediate needs. The family expenditures for education ranged from nothing to Rs 5-8-0 per month which was spent by one man whose son was attending high school. The average expenditure on education for all families was As 14 per year.

In considering a level of living our committee suggested Rs 6 as the minimum amount to spend on education for a family

FARMERS AND EDUCATION

of three children. In practice we find the people spending only one-seventh of that amount. Tuition in schools is generally free. The direct expense to parents occurs in the purchase of school supplies. There is also the indirect expense involved in the purchase of clothing suitable for school wear. The matter of time also enters in. As farm work is organized it seems that every pair of hands is needed during at least one-third of the year. Weeding, thinning of crops and harvesting, all are hand jobs. As there are no fences someone is needed for much of the day to herd cattle. So, apart from the money spent, the placing of a child in school represents another sacrifice in the giving of his time.

WHAT FARMERS DESIRE

It is commonly said that education is the one road to rural improvement. Judging from opinions expressed farmers do not all support that view. As a final question we asked, 'What one thing do you consider most essential for improving your economic condition?' Their replies follow in the order of frequency.

<i>Reply</i>		<i>No. of replies</i>
Capital for use at lower interest	..	42
Curb activities of moneylender	..	30
Recover mortgaged land	..	20
A school for our children	..	16
Freedom from debt	..	9
Better prices for farm produce	..	13
More land to farm	..	9
Better methods of farming	..	8
Better livestock, especially oxen	..	6
What is there to improve? Fate rules		5
Give up liquor	..	4
Pen up stray cattle	..	4
Stop gambling	..	3
Reduce social expenses	..	3
Government should reduce land revenue in lean crop years	..	3
More pasture space	..	2
Well for drinking water	..	2
TOTAL	..	179

THE FARMER SPEAKS

Only sixteen of those reporting mentioned education and it came fourth on the list. Difficulties in connexion with the procuring of capital and the recovery of mortgaged land were all placed before education. The difference of opinion arises from the narrow view which many farmers hold concerning education. The traditional village school is purely an academic institution occupied almost entirely with books. It is more often regarded as a means of escape from village life rather than a way for improving it. The few who complete their schooling usually go on to the towns or cities for further education and employment. Those who drop out of school return to farm work without having received any special preparation. Those who complete school and fail to get jobs often regard the time and money spent on education as wasted. This misconception of farmers in regard to the functions of a school was clearly shown in the replies given to a previous question. The answers below occur most frequently in replies given by fifty cultivators as to the purpose of the village school.

1. 'To teach the children to read and write.'
2. 'To teach children.'
3. 'So that boys can learn to count.'
4. 'So that boys can get jobs.'
5. 'To teach according to the rules.'¹

Recently the managing board of a high school where the majority of students came from farms decided to offer agriculture as an alternative subject. It was farmers themselves who rose up to 'slay the prophets'. 'The boys know how to farm', they said. 'Teach them something so they can get on in life.' With vision and foresight the Educational Department has tried to maintain Agricultural Bias classes in a number of villages in the area. Farmers themselves send in memoranda, asking that they be closed and the usual vernacular education or English be offered instead.

Many a farmer views education as a way of escape for his children from some of the hardships he endures. Obviously rural urban migration is desirable but education which leads

¹ Moomaw, *Education and Village Improvement*, p. 16.

only to urban employment may deprive the countryside of its leadership and in the end become a village liability. Under such circumstances rural expenditures for education may in many instances benefit the city more than the countryside. Has education no message for the 90% who remain on to toil in the fields? It does not occur to the average farmer that the village may become a place of beauty and refinement and farming a profitable and interesting occupation.

WHAT KIND OF EDUCATION?

It is a favourite sport with some to flay the 'educational system' and blame it for almost every existing evil. Poverty, ill-health and unemployment are all said to be the result of improper education. Choose the right type of education, we are told, and such ills will disappear. One wishes that the cure for such profound problems were as simple as the critics often suggest.

The type of education in force at a given time is to a large extent the result of popular demand. If undue emphasis is given to English, say, at the expense of the mother tongue, or if schools follow a course which leads young people from the countryside to the cities it is likely that parents' demands for their children can be met only in that way. Wide experience in efforts to popularize the Agricultural Bias course with farm parents has convinced us that they are slow to accept any radical change towards a more practical or village-centred type of education. Right or wrong, parents appear to want for their children more of the kind of education they are now receiving. Nevertheless there is an immediate need for developing a form of education more suited to rural needs.

We are advised by some to emulate the Folk Schools of Denmark. Others see in the free and less formal schools of the United States the type of education that India needs. But the most that we can learn from education in any other country is that it may succeed or fail according to its adjustment to the peculiar genius and needs of the people. *For rural India it would seem that the best course is to begin where we are.* Evaluate what we have, then make such adjustments or additions as past

PART THREE



PART THREE

CHAPTER ONE

HOW SOME FARMERS SUCCEED

WE have so far presented the case of the underprivileged farmer. While his income barely keeps him and his family on the edge of existence it does not necessarily follow that he is an unskilled farmer. When we consider his social disabilities, his frequent illness and lack of food, we may conclude that he deserves praise rather than criticism in the use that he makes of his limited resources.

However, there are in almost every village some who rank as successful farmers. Working under circumstances which would mean only blighting poverty to their neighbours these men succeed. They make a living, keep out of debt and maintain the fertility of their soil. Besides these there are the farmers 'by birth', the Kanbis and Patidars of western India, the Jats of the Punjab and the Reddys of south India. These people by tradition are good farmers and as a rule take a pride in their husbandry wherever they are found. Apart from birth or tradition we prepared a list of thirty-six farmers who were regarded by their neighbours as successful. Some are tenants who succeed in supporting their families well and in laying aside something for the future. Others are owners who have retained the title to their land during the years and maintain it in a high state of fertility. Some began as tenants and later succeeded in buying land. As a rule we depended on the villagers themselves to point out the men they regarded as most successful for one reason or another. Several have been chosen from this group and each illustrates some phase of Indian farming at its best.

Bhavsingh is about 45 years of age and he comes from a line of 'farmers by birth'. He is married and has four children. His eldest son works with him on the farm. The second son is in high school and one small boy attends the village school. His



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THE FARMER SPEAKS

daughter is married. Bhavsingh studied through the fifth grade but his wife is illiterate.

He farms twenty-two acres of ancestral land. His neighbours readily acclaim him as one of the best farmers in the village. Asked why, they said, 'He is not in debt, and he always gets good crops'.

His land lies in two blocks, one about a mile from his house and the other somewhat farther away. We met him early in the monsoon and he explained the cropping pattern which he follows:

Cotton	..	..	..	7 acres
Jowar	..	..	..	6½ ,,
Legumes	..	..	..	4½ ,,
Wheat	..	..	..	1 acre
Hay and pasture		..	..	3 acres
<hr/>				<hr/>
TOTAL ..				22 acres
<hr/>				<hr/>

About one acre of upland rice is grown with the cotton and some monsoon vegetables are mixed in with the jowar and legume crops. His general rotation is cotton, jowar and legumes. The grass is permanent. Farm manure is generally used for the cotton crop.

Manure and litter are carefully saved in round pits five feet deep and about nine feet in diameter. Liquids from the stable are also drawn into the pit. While the pits are being filled the contents are kept covered from day to day, and water is added to prevent excessive drying. When a pit is filled it is well sprinkled with water and then sealed with a plaster of earth until the contents are completely decomposed. This is in sharp contrast to many of his less prosperous neighbours who still allow their farm manure to lie around in heaps or in shallow pits exposed to the burning sun.

Several months later Bhavsingh showed us his crops on the threshing-floor. 'I always have crops', he said. 'Some years there is more, and some years there is less, but we always have enough.' It was there that we coined the phrase used elsewhere in this book, 'a fertile soil is a dependable one'.

HOW SOME FARMERS SUCCEED

A statement of Bhavsingh's returns and expenses follows:—

<i>Sources of Income</i>		<i>Sold for cash</i>			<i>Kept for home use</i>		
		Rs	As	P.	Rs	As	P.
Cotton	..	..	299	4	0	nil	
Jowar	..	..	120	0	0	50	0 0
Legumes	..	..	62	0	0	35	0 0
Other grains	..	..	....			37	0 0
Vegetables, etc.	..	..	....			6	0 0
Milk	..	..	48	0	0	32	0 0
		TOTAL	..	529	4	0	160 0 0

Farm Operating Expenses

		Rs As P.
Taxes and toll	..	.. 67 8 0
Labour	..	.. 45 0 0
Seeds, etc.	..	.. 16 0 0
Feeds and miscellaneous	..	.. 60 0 0
Farm equipment	..	.. 42 0 0
	TOTAL	.. 230 8 0
<i>Receipts less expenses</i>		.. 298 12 0
Depreciation on tools and livestock	15	0 0
		<hr/> 283 12 0
Grain and other products used at home	..	.. 160 0 0
<i>Income to family</i>	..	.. 443 12 0

There are some noteworthy characteristics about Bhavsingh as a farmer. He has a splendid yoke of oxen in which he takes pride. He claims he has never lost an animal except from old age. Unlike many men in his circumstances, he drives his own yoke in the field and his work is very well done. An abundance of legume fodder enables him to keep his livestock in good condition without the purchase of much additional feed.

He maintains his soil in a high state of fertility with a pride of achievement rarely found. He purchases no manure but

THE FARMER SPEAKS

utilizes everything he has at home for compost. The fields are well guarded to prevent erosion, and all available space is used for crops.

Even though the family is considered well-to-do they do nearly all of the farm work personally, employing just as little help as possible. 'We have work nearly all of the year', said Bhavsingh. 'If we have no crops to care for, I work on the fields and care for the stock.'

They live simply but well. 'We have two full meals a day but no tea. We grow nearly all our food on the land. A farmer has no business going to town often. Some who are in debt, ride the bus to town now and again. I go only once in two or three months, and walk.' He wears homespun and on his own statements the family spends no more for clothing than many poor families.

'We have very little sickness and whenever anyone needs medical help we go to the doctor in town. I hope that Ramo will become a farmer. The other two boys may find work elsewhere. There is just enough land for one.'

In brief, Bhavsingh's success as a farmer is due to:

1. Careful cropping and soil conservation, which assures him at least an average yield every year.
2. Pride in good husbandry.
3. Business management. Being free from debt he can market his crops wherever and whenever he chooses.
4. Simple and frugal farm life.

When these simple observations were made to a group of training college students a few seemed disappointed and thought that there ought to be some magic or drama attached to success in farming.

Manor, a tenant farmer, provides a different picture. He is about 36 years of age, married, with three children. He left school after the second standard. His wife is illiterate. One son works as a farm labourer and the other two children attend school.

For nearly eight years Manor has rented seventeen acres of land on a half-share basis. He is given a contract for one

HOW SOME FARMERS SUCCEED

year at a time, but having had the land for so long he is reasonably sure of continued occupancy. He owns all of his livestock and equipment, is free from debt and he says he is able to 'keep a little money back each year'. Seventeen acres of average land are not usually considered sufficient to support a family, but Manor has what he regards as a satisfactory level of living. He sends his children to school and now plans to buy a small piece of land for himself. Just how does he do this when many of his neighbours with a similar amount of land are destitute?

In the first place he is a good farmer. He manures the soil, keeps the fields free from weeds and shrubs, and guards against erosion. He treats the land just as if it were his own. Seventeen acres of land is not enough for one yoke, but he has enough feed to support his oxen and some cattle in good condition. We noted his cropping pattern for the year under review. It is shown below with annual yields.

<i>Crop</i>		<i>Acres</i>	<i>Yield per acre</i>
Cotton	..	..	7½ 10½ md.
Jowar	..	..	5 25 "
Legumes	..	..	4½ 14 "
			<hr/>
TOTAL	..	17 acres	<hr/>

A statement showing Manor's share of the farm returns follows:—

<i>Sources of Income</i>		<i>Sold for</i>	<i>Kept for</i>
		<i>cash</i>	<i>home use</i>
		Rs As P.	Rs As P.
Cotton	..	.. 125 10 0	nil
Jowar	..	.. 36 0 0	48 0 0
Legumes	..	.. 19 0 0	19 0 0
Vegetable garden		.. ....	8 0 0
Milk and ghee	..	.. 22 0 0	24 0 0
		<hr/>	<hr/>
TOTAL	..	202 10 0	99 0 0
		<hr/>	<hr/>

THE FARMER SPEAKS

Farm Operating Expenses

		Rs	As	P.
Taxes and toll	..	11	12	0
Rent of grass land	..	16	0	0
Labour hired	..	8	0	0
Seeds, etc.	..	6	0	0
Feeds and miscellaneous	..	65	0	0
Farm equipment	..	16	0	0
TOTAL EXPENDITURE	..	122	12	0
<i>Receipts less expenses</i>	..	79	14	0
Increase in value of livestock	..	16	0	0
		95	14	0
Grain and other products used at home	..	99	0	0
<i>Income to family</i>	..	194	14	0

As a tenant farmer Manor has several notable characteristics.

1. He has only a limited amount of rented land at his disposal, but he cares for it as if it were his own and even though he rents it for only one year at a time he feels a reasonable assurance of permanent occupancy. He has earned this right because of good husbandry. He uses manure, builds up the soil and plans for a satisfactory continuous income. Had he followed the example of some of his neighbours who just go on 'taking crops' because they have no permanent rent contract, his condition might have been no better today than theirs.

2. Unlike many tenants he keeps a small herd of cattle. They help to maintain the soil, provide spare-time employment and add to the farm income.

3. The entire family join in doing as much of the farm work as possible. They take pride in doing it well.

4. They are free from debt, making it a policy to live simply and not spend money that is not their own.

Other examples might be given, for India has many prosperous farmers. In brief, success in peasant farming depends largely upon using intensively the resources at hand. Land and capital are usually limited, and more or less invariable, except at considerable risk. Under such circumstances greater dependence must be placed on labour and management.

CHAPTER TWO

FARMING AS AN OCCUPATION FOR YOUTH

IN almost every large village there are young men who have gone through high school and sometimes college at considerable expense to their parents and to the state, only to find that there is no employment open to them. Trained chiefly with some vague clerkship in mind it does not occur to them that farming and manual occupations may reward study and intelligence as well as brawn. These young men are often referred to in ridicule as misfits and idlers. Impatient fathers speak of the money spent on 'learning' as wasted.

This steady increase in unemployment, especially among young men of high school grade, gives rise to the question often asked: 'Why cannot some of these take up farming with reasonable assurance of success?' Numerous proposals and plans have been suggested. The most common is that young men without means should be provided with tracts of farm and equipment by some Governmental agency.

A similar proposal is that the Government secure a tract of land sufficient to accommodate up to fifty young men at one time. The land would be subdivided into small model farms. Young men would occupy these as apprentice farmers for a period of three or four years, under supervision. They would pay a reasonable rate of rent and it is hoped that by the end of three or four years they could save enough money to set up by themselves as farmers.

We met many farmers, some weathered by hard experience and others stolid and beaten by adversity. We were constantly reminded that about 70% of the boys living today will eventually take the places of these men and meet many of the same problems that they meet. Among the new generation of farmers will be some who have had high school and college education. Many may have to carry on with about the same

THE FARMER SPEAKS

amount of capital and land that their fathers had. So there are several important questions which arise.

1. What are the reasons for the incidence of failure among peasant farmers?
2. What are some of the qualifications essential to success in farming?
3. What financial prospects are there for those who take up farming?

INCIDENCE OF FAILURE

We were impressed by the number of farm operators who mortgage land and equipment and in the end meet foreclosure which reduces them to the status of labourers. There are others, especially tenants, who grind along from year to year on a level of living scarcely above that of the average labourer. In a sense they too have failed. We are aware that the failure of a farmer to carry on successfully would not be due to any one cause alone. More likely it is the result of several factors working to his disadvantage at the same time. Causes of failure met most frequently were:¹

1 *Inadequate credit facilities.* Capital for financing the usual farm operations and for meeting emergencies is seldom available except at excessive rates of interest. There is a common belief that a man has crossed the danger line the moment his interest load becomes heavier than he can carry. Villagers are so familiar with this that they freely point out those who are fighting in a battle already lost. Once a man begins to default in his interest payments the time of foreclosure is near.

2 *Poor health.* More than is commonly realized, poor health among farmers and their families is a contributing factor in failure. To a great extent sickness occurs during August, September and October, the most strategic period of the year from the standpoint of planting and caring for crops. With little or no medical aid available it is common practice to allow illness to run its course. Numerous cases of crop failure could be traced to such circumstances.

¹ Moomaw, I. W., *Education and Village Improvement*, p. 95.

3 *Poor soil.* Failure to get fields capable of producing fair to average crops brings disaster to many marginal farmers. The farmers most poorly equipped can often get only poor fields that the better men refuse to cultivate. Only in good seasons do such fields produce a fair crop. With drought, flood or frost more or less common, a farmer on poor land stands a chance of losing his crop and the expense he has incurred. This is especially true of tenants who have to go out in search for fields each year.

4 *Lack of training and education.* All of the men had previous experience in farming along traditional lines but none had special training in agriculture, or education that would enable him to follow improved practices. Of sixty-two cases of failure considered, only four had received any formal education. One had reached the fifth grade and three only the third grade. While admitting that experience is one of the first essentials to success in farming the man without a reasonable amount of education is at a disadvantage in his business transactions.

An illiterate farmer had acquired thirteen acres of land during the prosperous years of 1918-26. Then came the difficult years from 1931 to 1936 and he began to borrow small sums of money for the payment of land revenue and living expenses. Asked if he could show any records of his transactions he gave the common reply, 'The money all came and it went again'. Inquiry revealed that he could not have borrowed more than Rs 120 per year during the four years. But he was surprised when his creditor to whom he had mortgaged his land presented a foreclosure order with an account that took all of his land in settlement.

While there are numerous examples of untrained men who are good farmers, the experience of sixty-two who failed would suggest that some training in agriculture and a reasonable amount of formal education would have been an advantage to them.

There is also the factor of management in the use of land, labour and equipment. Land and labour are often wasted because of inadequate equipment. Again, if the operator is to

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use sturdy oxen and good implements to advantage, he must have sufficient land. One example of this was a farmer who tried to operate 18 acres of land valued at Rs 2,100 with oxen and implements worth only Rs 821. The work was poorly done, and he was losing his land. Success to a large extent depends upon efficiency in the use of labour, capital and land.

SOME QUALIFICATIONS FOR SUCCESS IN FARMING

While the average young man with education may have a certain advantage he will no doubt meet the usual hardships of unfavourable seasons, low prices or lack of capital commonly met by all farmers. If he is to succeed he will need to have some of the same qualifications which are essential to their success. Among these are:

1 *A strong, sound body.* This is a factor too often overlooked by those presenting schemes for absorbing educated youth in farming. Many of the young men are in frail health and unaccustomed to physical labour. While improvements in equipment may make the work somewhat easier, the ability to do a full day's work in the field is still one of the first qualifications of a successful farmer.

2 *Good judgement and education.* Both experience and education are needed. The peasant often looks to tradition and custom for guidance. He ploughs and sows in the same manner that his ancestors did, not realizing that by his own acts he might determine the yield of crops. The farmer on depleted soil has more need for the help of chemistry, physics and botany, than the man on good land. Adequate knowledge in these sciences will be of great help to the future farmer.

The narrow margin on which he must work makes adroitness and insight in business transactions just as essential to the farmer as to the business man. The young man with education who takes up farming will have ample scope for using it. The fact that his business transactions must be conducted on a small scale does not lessen the importance of good judgement and skill in dealings. We found instances where illiterate farmers were selling cotton to local buyers at prices from 15% to 25%

FARMING BY YOUTH

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OCCUPATION FOR YOUTH

COND FARM

Receipts

	Area in acres	Yield per acre in maunds of 40 lb.	Total value of crops
	.. 7	10½	Rs As P.
	.. 3½	30	286 9 0
	.. 1	12	146 13 0
	.. ....	....	26 12 0
	.. ½	....	27 8 0
TOTAL	.. ....	....	42 5 0
			<hr/>
			529 15 0

Expenses

	Rs As P.
per acre	.. 84 0 0
per acre	.. 42 0 0
10-8-0 per acre	.. 10 8 0
td and water	.. 12 0 0
	<hr/>
	148 8 0

	Rs As P.
ys 120 @ As 5	.. 37 8 0
ays 63 @ Re 1-8-0	.. 94 8 0
	<hr/>
	132 0 0
land and garden	.. .. 6 3 0
nd hemp seed	.. .. 22 0 0
at hire	.. .. 7 12 0
miscellaneous	.. .. 6 10 0
	<hr/>
	323 1 0
<i>Net Income</i>	.. ....
	<hr/>
	206 14 0

THE FARMER SPEAKS

however, give an idea of the returns that may be expected from farming under improved conditions. Yields of crops are considerably above the average. In our inquiry we found an average of 7.4 maunds per acre for cotton while the students had 12.0 maunds per acre. This represents an increase of 39%.

FIRST FARM

Receipts

<i>Crops grown</i>	<i>Area in acres</i>	<i>Yield per acre in maunds of 40 lb.</i>	<i>Total value of crops</i>	<i>Rs As P.</i>		
				<i>Rs</i>	<i>As</i>	<i>P.</i>
Cotton	34	11	4	0
Jowar	3	22	90	6 0
Millet and legumes as mixed crops	..	1½	..	54	4	0
Fodder	32	0	0
Garden (irrigated)	½	..	68	11 0
TOTAL	439	14	0

Expenses

Land rent for:

	<i>Rs As P.</i>	<i>Rs As P.</i>
Cotton	.. 12 0 0 per acre	45 0 0
Jowar	.. 9 0 0 , ,	27 0 0
Millet, etc.	.. 12 0 0 , ,	18 0 0
Garden—land and water rent	.. .... ....	12 0 0
		102 0 0

Labour hired:

	<i>Rs As P.</i>	<i>Rs As P.</i>
Man-days 42	.. 0 4 0 10 8 0	
Yoke-days 53	.. 1 8 0 79 8 0	<hr/>
		90 0 0
Seeds, farm and garden	.... ....	4 6 0
Manure and hemp seed	.... ....	15 0 0
Implement hire	.... ....	6 10 0
Toll and miscellaneous	.... ....	5 8 0
		<hr/> 223 8 0
<i>Net Income</i>	..	<hr/> 216 6 0

FARMING AS AN OCCUPATION FOR YOUTH
SECOND FARM

Receipts

<i>Crops grown</i>		<i>Area in acres</i>	<i>Yield per acre in maunds of 40 lb.</i>	<i>Total value of crops</i>
Cotton	..	.. 7	10½ "	Rs As P. 286 9 0
Jowar	..	.. 3½	30	146 13 0
Legumes	..	.. 1	12	26 12 0
Fodder	..	.. ....	....	27 8 0
Garden (irrigated)	..	.. $\frac{1}{8}$	....	42 5 0
				<hr/>
	TOTAL	.. ....	....	529 15 0

Expenses

Land rent for :

		<i>Rs As P.</i>
Cotton Rs 12 per acre	..	.. 84 0 0
Jowar Rs 12 per acre	..	.. 42 0 0
Legumes Rs 10-8-0 per acre	..	.. 10 8 0
Garden—land and water	..	.. 12 0 0
		<hr/>
		148 8 0

Labour hired :

		<i>Rs As P.</i>
Man-days 120 @ As 5	..	.. 37 8 0
Yoke-days 63 @ Re 1-8-0	..	.. 94 8 0
		<hr/>
Seeds, farm and garden	..	.. 6 3 0
Manure and hemp seed	..	.. 22 0 0
Implement hire	..	.. 7 12 0
Toll and miscellaneous	..	.. 6 10 0
		<hr/>
		323 1 0
		<hr/>
<i>Net Income</i>	..	206 14 0
		<hr/>

THE FARMER SPEAKS
THIRD FARM

Receipts

<i>Crops grown</i>	<i>Area in acres</i>	<i>Yield per acre in maunds of 40 lb.</i>	<i>Total value of crops</i>	<i>Rs As P.</i>		
				<i>Rs</i>	<i>As</i>	<i>P.</i>
Cotton	..	3½	15	182	9	0
Jowar	..	2½	24	86	10	0
Legumes	..	½	11	22	12	0
Fodder	18	8	0
Garden (irrigated)	..	½	....	47	0	0
TOTAL	357	7	0

Expenses

Land rent for:

			<i>Rs As P.</i>
Cotton Rs 12 per acre	..	..	39 0 0
Jowar, etc. Rs 9 per acre	..	..	22 8 0
Garden—land and water	..	..	12 0 0
			73 8 0

Labour hired:

Man-days 36 @ As 4-6	..	..	10 2 0
Yoke-days 31 @ Rs 1-8-0	..	..	46 8 0
Seeds, manure and hemp seed	..	..	16 10 0
Miscellaneous	..	..	3 12 0
Implement hire	..	..	9 0 0
			159 8 0
<i>Net Income</i>	..	....	197 15 0

Turning to jowar, the student farmers had an average yield of 25.3 maunds per acre while the average for the 192 farms was 15.4 maunds. This is an increase of 40%. The grain being of superior quality brought a higher price when sold. The sales from the small plot of irrigated garden made a substantial increase in the income. One special advantage of vegetable gardening is that the major part of the work comes during the months of November, December and January, when work on the

FARMING AS AN OCCUPATION FOR YOUTH

main field crops is light. Had they taken land enough to provide full employment and had they been in a position to keep some improved livestock the returns would have been still more favourable.

The young men were supervised and they had an interest in farming. The average beginner, however good his equipment, and however hard he might try, could hardly expect to do as well as they.

AMOUNT OF CAPITAL NECESSARY TO BEGIN FARMING

We still have to answer the question as to the amount of capital necessary in order to begin farming along improved lines. From a study of farms under varying conditions we would suggest the following as being about the optimum for a one-man, family farm of twenty acres.

	Items		Cost			
	Rs	As	P.	Rs	As	P.
<i>Livestock</i>						
1 Yoke of oxen	175	0	0	
2 Pure-bred cows	100	0	0	
12 Chickens, (hens only)	39	0	0	
				<hr/>	<hr/>	314 0 0
<i>Equipment</i>						
Wooden plough	5	8	0	
Iron plough	20	0	0	
Iron cultivator	24	0	0	
Wooden seeder	5	4	0	
Cart	90	0	0	
Wooden cultivator (with steel blades)	6	8	0	
Leveller	2	0	0	
Extra yokes	2	12	0	
Hand tools, with steel blades	14	0	0	
Ropes, baskets, and miscellaneous	8	0	0	
Canvas cart cover	6	8	0	
Oxen covers	4	0	0	
				<hr/>	<hr/>	188 8 0
TOTAL	502	8	0	

The average investment in livestock for the farms studied was Rs 145-5-0 and for farming equipment Rs 62-8-0. This

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makes a total of Rs 207-13-0 which is 60% less than we have recommended. While it would be possible to carry on with a somewhat lower investment in equipment than we have suggested, a man's chance of succeeding would ordinarily be limited to that extent.

Those who personally contemplate farming or recommend it as an occupation for others should bear in mind that the average beginner even though educated will meet about the same problems which other farmers meet. However, a young man who loves outdoor life, and who has good health, education and initiative can find here both congenial and profitable employment.

We may expect some improvements in the science and technology of farming in the near future. Control of plant diseases, more productive varieties of plants and animals and improved implements may help to increase the farm income and make it more secure than at present. Developments in communication, the control of epidemics and better schools give some assurance that farm life in the future may be more healthful and attractive.

At present a kind of procession leads many of the best young men and women into towns and cities where they crowd upon a few poorly paid posts. If some of these will turn and lend their hearts and hands to the improvement of farming and to the achievement of rural life at its best, they will be assured a comfortable living, and with it, a measure of security and culture which urban life may not give.

CHAPTER THREE

NEW WEALTH FROM OLD FARMS

EVENTS of the past fifty years have profoundly influenced the Indian farmer. The economy of his life has been seriously dislocated by causes often beyond his knowledge and control. Once he had his time-honoured panchayat system for local self-government. Disputes and difficulties were, in theory at least, handled without expense by a local committee. Wages of labour, prices of commodities and trade practices also were, to a large extent, determined in the same manner. Representative government with its array of civil courts concentrated in towns and cities has now displaced much of that. To the peasant farmer this slow-moving procession of *vakils* and magistrates seems costly and cumbersome when compared with his panchayat of yesterday.

The increase of railway travel also has influenced the countryside. Fearing defilement, Kipling's moneylender in *Kim* remarked in disgust, 'There is not one rule of right living that these trains do not cause us to break'. Sitting cross-legged on the same wooden bench and drinking water from the same well but through different taps, both caste and outcaste have unwittingly helped to transform the India of *Kim*.

Farming was once called 'a manner of life'. Now that money has so nearly displaced the method of barter, farming has also become a business. Slow-witted and timid, the farmer has to buy and sell in the market-place against those who are literate and more adroit than he. Under barter the farmer produced food and fibre which he gave to the tailor, *vaid*, barber and carpenter in exchange for their services. He was the kingpin of the village. If crops were normal all enjoyed a measure of comfort. If there was failure or famine all suffered alike. It was in the public interest for the farmer to own the land he cultivated. Now, burdened by debt, and often torn between his

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creditors, he looks back on the simple security of those days and says that it was good.

Motor buses now bring the gadgets of industry to his door. Instead of a two-pice lamp burning castor oil, imported kerosene lights his home. The empty tin ripped open and flattened out makes cups or an unsightly but efficient patch for his roof of palm leaves. Many articles of clothing and home utensils are imported or made in nearby factories. This has resulted in a gradual migration of wealth from the countryside to the towns. When possible, money is borrowed to send young people to high school or college. But there has been little change in the methods of farming since the days of Akbar.

With the more recent fall in prices for farm products the small farmer's position has become extremely difficult and the rate of land mortgaging has been accelerated. Farmers have made complaints against high rates of interest and there have been local threats of revolution. These should serve as a warning as to what may happen if certain just grievances remain too long without reasonable redress.

The Government has greatly increased rural wealth through irrigation projects, co-operative credit and research in plant and animal breeding. It would be impossible to estimate the immense cumulative value of these projects both as a safeguard against famine and as a direct increase in rural wealth. However, there are additional measures still needed if the small farmer is to be saved.

The first pertains to a land policy. Land Mortgage Banks are rendering useful help to the middle-class farmer but their service seldom reaches the thousands of small holders whose land is slipping from them. It would seem that an additional branch might well be opened for the protection of small operators. These men, also taxpayers, often suffer without the knowledge of any agency to help them.

The more energetic among them might be given both counsel any financial aid on suitable terms so that they could regain title to their lands. Each taluka might well have an honorary arbitration board to mediate semi-officially between debtors and

NEW WEALTH FROM OLD FARMS

creditors in an effort to prevent foreclosures. While this would not be a complete land policy it would be a beginning among underprivileged men, and help to conserve the tradition of peasant ownership.

Nearly 60% of the men spoke of high rates of interest and poor credit facilities as their chief problem. Present methods for financing farm operations tend to force the lender to a level of crafty bargaining, and the debtor to a sullen evasion of his responsibilities. The system is not as profitable to the lender as is commonly supposed and it is ruinous to the debtor.

The private lender will be an important person in farm finance for many years to come. He should therefore be registered. His accounts should be audited and his methods made to conform as nearly as possible to those of a well-managed co-operative. This would accomplish much toward lifting the present level of credit operations, as the lender's services could be available only to clients of integrity. Satisfactory credit and education in its proper use are probably the first steps in solving the low-income problem of the 'depressed class' farmer.

Conservation is a direct source of income not yet available to these people. Often clinging to only the fringe of subsistence they mine the soil from year to year. Monsoon erosion takes its heaviest toll from their fields. The Government might well undertake the supply of seed for green manuring on a large scale, recovering the amounts from each farmer at harvest time. The small farmer alone cannot be expected to stem the ravages of erosion on his fields. Once plans are made and waterways determined, farmers working in co-operation may do much of the excavation, plugging of gullies and levelling. But some corporate step must be taken first. Farm land is predominantly the nation's source of revenue, and where outside labour must be employed five-year loans at a nominal rate of interest might be made.

In some areas gullies have formed to such an extent during the years and fields have become so eroded, that much of the monsoon rain needed to produce crops may escape laden with silt on its way toward the sea almost as soon as it falls. To

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conserve this water and also the soil that it carries would open up a new source of wealth which in itself would contribute much toward the relief of these people.

With a long growing season, adequate rainfall and soil responsive to good treatment, the Indian farmer has some assets which men of other countries might envy and there is no inherent reason why his poverty cannot be overcome.

PLANNING A MORE SECURE AND ADEQUATE INCOME

The farmer of this class is more or less the servant of tradition. He crops his land from year to year regarding failure or success largely as matters of chance. By planning and management the economic risks of his occupation may be greatly reduced and the income increased. A reference to the farm of Lalji will illustrate this point.

He farms nine and three-quarter acres of land. He owns five acres and rents the remainder on a half-share basis. He complained of having suffered three moderate and one major crop failures since 1930. We have chosen his farm because it is typical of many which might be re-planned on a more secure and profitable basis. We give first a brief statement of his farm organization as we found it at the time of inquiry.

To the farm income may be added the sum of Rs 20 which is the approximate value of fuel and food used direct from the fields. The wife and daughter earned some grain and about Rs 15 per year working at common labour but Lalji himself had only 117 days of work and his yoke was occupied for 77 days. Counting conservatively he was employed not more than half the time and his yoke a third of the time.

The farm income is low, and on his statement it is uncertain. With thin soil farmed by extensive methods the yields of crops are at once influenced by vagaries of climate. There seems to be a case here for the introduction of cottage vocations. But the people say, 'We are farmers'. In this they may be correct. The hand which is accustomed to heavy field implements cannot turn readily to the spinning-wheel or loom. However that may be Lalji needs more and better land. But since that is hardly

NEW WEALTH FROM OLD FARMS

His Crops

		Acres	Yield per acre	Value of products (his share)
				Rs As P.
Cotton	..	..	5½	78 4 0
Jowar	..	..	3½	56 0 0
Legumes	..	..	½	11 0 0
		TOTAL	..	145 4 0

His Farm Expenses

			Rs As P.
Land revenue and toll	..	..	16 6 0
Hired labour	..	..	7 0 0
Seeds, etc. ..	..	..	3 4 0
Feed and miscellaneous	..	..	28 0 0
Repairs and equipment	..	..	6 4 0
		TOTAL	60 14 0
		<i>Farm Income</i>	84 6 0

Livestock and equipment

One yoke of oxen ..	..	..	75 0 0
Implements ..	..	..	12 0 0
Hand tools, etc. ..	..	..	10 0 0
			97 0 0

His Days of Work

		<i>Man-days</i>		<i>Yoke-days</i>
Cotton	..	..	46 days	..
Jowar	..	..	40 „	..
General	..	..	31 „	..
		<hr/>	<hr/>	<hr/>
TOTAL AS REPORTED	..	117 „		.. 77 „
		<hr/>		<hr/>

obtainable his hope is in using his present land and equipment to better advantage.

We suggest below a plan for his farm which would protect him against crop failures to a large extent, and also provide a more satisfactory income. He would need to borrow Rs 200 in order to finance his farm operations under the improved plan. We suggest the expenditure of at least Rs 22 annually for manure,

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in the beginning. This and the keeping of additional livestock should bring his crop yields up to the conservative estimates given below.

THE SAME FARM, RE-PLANNED

Crops Produced

		Area in acres	Yield per acre	Value of Lalji's share
				Rs As P.
Cotton	2½	9 md.
Jowar	3½	22 ,,
Legumes	1½	12 ,,
Fodder	1½	....
Upland rice	½	16 ,,
Garden	½	80 ,,

Livestock and Products

1,400 lb. milk @ Re 1 per lb., and ghee	..	..	87 8 0
Young stock (inventory increase)	..	..	26 0 0
Fowls	..	..	18 0 0
		TOTAL	322 4 0

Farm Expenses

			Rs As P.
Tax and toll	..	..	18 0 0
Labour	..	..	10 8 0
Seeds	..	..	6 0 0
Feed	..	..	75 0 0
Farm equipment	..	..	12 0 0
Manure	..	..	22 0 0
Interest on Rs 200	..	..	12 0 0
		TOTAL	155 8 0
		Farm Income	166 12 0

Livestock and Equipment (Estimated)

			Rs As P.
One yoke of oxen	..	..	100 0 0
Implements and cart	..	..	72 0 0
Hand tools, etc.	..	..	25 0 0
Cow	..	..	50 0 0
Young stock	..	..	65 0 0
		TOTAL	312 0 0

NEW WEALTH FROM OLD FARMS

By the investment of Rs 200 additional for livestock, equipment and manure the farm income for this same land can be increased from Rs 84-6-0 to Rs 166-12-0 within several years. At the time of our inquiry Lalji was merely 'taking crops', with oxen and equipment worth Rs 97. There is no magic attached to the increase of the farm income. With the farm re-planned as shown he depends on the help of additional equipment and livestock to the extent of Rs 200. The larger income would be more secure than the present lower income earned under less favourable circumstances. At the same time, the fertility of his soil would be increased from year to year.

Another feature of the re-planned farm is that the operator is employed gainfully during a larger part of the year. By growing different crops his oxen also are employed profitably for more days.

	Man-days	Days of Work			Yoke-days
		
Cotton	.. 26 days	..	..	..	14 days
Jowar	.. 45 ,,	..	..	..	25 ,,
Legumes	.. 16 ,,	..	..	..	9 ,,
Rice	.. 6 ,,	..	..	..	2 ,,
Fodder	.. 30 ,,	..	..	..	10 ,,
Garden	.. 24 ,,	..	..	..	2 ,,
General	.. 40 ,,	..	..	..	36 ,,
TOTAL	.. 187 days	..	..	..	98 days

The solution of the low-income farmer's problem lies in building up and using more intensively the soil and other resources he has at hand. The wealth of the country can be greatly increased if the small farmer can be helped to a point where he may abandon haphazard methods and organize his farm, however small, for production along scientific lines.

NEW WEALTH AND THE LEVEL OF LIVING

Due to their vast numbers, low income and level of living, low-income farmers are setting the pace for economic life in a larger section of the population than is commonly considered. It is their poverty which helps to determine a life of poverty for people in other lines of work.

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Just as by Gresham's Law, cheap money may drive out dear money, a low level of living may drive out a higher level. Considering the country as a whole, these men holding their little farms in a low state of production are an influential minority in Mother India's farm household.

A mere increase of wealth may not of itself be a true criterion of prosperity. Only when it results in a higher level of physical, mental and spiritual well-being is it really worth striving for. Those who have been content to work only for an increase in material wealth have sometimes learned to their disappointment that man does not live by bread alone.

The farmer asks for neither comfort nor freedom from toil, but that some fruits of culture should come to him as a portion of his rightful heritage.

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Stomach p.

Students, a

Sugar, 38.

Sugar-cane

Sulphur, fi

Sumanlal,

Survey N:

Tailor, 18

Taxes (sc

Tea, 38,

Tea-her at vil

